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The National Institutes of Health

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REFERENCE SERVICES DIVISION
NOV 1965
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Prepared by

Office of Research Information, NIH

Bethesda, Maryland 20014

Public Health Service Publication No. 1331

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C., 20402 - Price 60 cents

Foreword

The *NIH Almanac* has been assembled for the use of information staffs, administrators, and others who often need ready access to pertinent facts about the Public Health Service but have previously lacked a single comprehensive source for this purpose.

Although the Almanac does include data from other basic NIH publications, it is intended to complement rather than replace them. The reader is particularly referred for further information to "Basic Data Relating to the National Institutes of Health" and the NIH brochure (PHS Publication No. 81).

CLIFFORD F. JOHNSON,
Chief, Office of Research Information.

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Part I

HISTORY OF NIH

IMPORTANT EVENTS IN THE HISTORY OF NIH (By Year)

1798—The Marine Hospital Service was established with the signing by President John Adams of an act for the relief of sick and disabled seamen on July 16.

1799—An amending act of March 2 extended benefits of the Marine Hospital Service to officers and men of the U.S. Navy.

1802—The admission of foreign seamen to Marine hospitals on a reimbursable basis was authorized on May 3.

1803—The first permanent Marine hospital was authorized to be built in Boston, Mass., on May 3.

1807—Dr. Benjamin Waterhouse was appointed physician in charge of the Boston Marine Hospital on November 27. He was the first to introduce interns and residents into hospitals in the United States.

1870—A bill dated June 29 provided for administration of Marine hospitals within a Bureau of the Treasury Department with a medical officer in charge.

1871—Dr. John Maynard Woodworth was appointed Supervising Surgeon of the Marine Hospital Service in April, marking the beginning of central control of Marine hospitals.

1873—Regulations were approved on October 1 for appointment and promotion of physicians in the Marine Hospital Service, establishing the first career service for civilian employees in the Federal Government.

1875—A bill passed on March 3 authorized admission of Navy seamen and seamen of other Government services to Marine hospitals on a reimbursable basis.

In recognition of the progress Dr. John Maynard Woodworth made in reorganizing the Marine Hospital Service, his title was changed by law to Supervising Surgeon General on March 3.

1878—The First Federal Quarantine Act was passed April 29.

Congress appropriated funds "for investigating the origin and causes of epidemic diseases, especially yellow fever and cholera," December 21.

1879—The National Board of Health was created by law on March 3. It represented the first organized, comprehensive, national medical research effort of the Federal Government.

Dr. John B. Hamilton was appointed Surgeon General of the Marine Hospital Service on April 3.

1884—The seamen's hospital tax was abolished on July 1 and the cost of maintaining Marine hosptials was paid out of a tonnage tax, a practice which continued until 1906.

1887—A bacteriological laboratory, known as the "Laboratory of Hygiene," was established under Dr. James J. Kinyoun at the Marine Hospital, Staten Island, N.Y., in August, for research on cholera and other infectious diseases. (Redesignated Hygienic Laboratory, 1891.)

1889—The Public Health Service Commissioned Corps was authorized on January 4 establishing by law the policy of a mobile corps subject to duty anywhere upon assignment.

1890—Congress gave the Marine Hospital Service interstate quarantine authority on March 27.

1891—The Hygienic Laboratory moved from Staten Island, N.Y., to Butler Building, Service Headquarters, Washington, D.C., in June.

Dr. Walter Wyman was appointed Surgeon General of the Marine Hospital Service on June 1.

1893—A new Quarantine Act, passed February 15, strengthened the Quarantine Act of 1878.

1899—The Marine Hospital Service was directed by Congress on March 2 to investigate leprosy in the United States.

Dr. Milton J. Rosenau succeeded Dr. James J. Kinyoun as Director of the Hygienic Laboratory on May 1.

1902—The earliest studies of Rocky Mountain spotted fever took place in Montana.

A bill approved July 1 changed the name of the Marine Hospital Service to the "Public Health and Marine Hospital Service."

The Biologics Control Act, passed July 1, gave the Public Health and Marine Hospital Service responsibility for licensing and regulating the interstate sale of biologic products applicable to the diseases of man, and established the Biologics Control Division.

The Advisory Board for the Biologics Control Division was established July 1. It later became the National Advisory Health Council.

The Pan American Sanitary Bureau was established December 2. The Public Health and Marine Hospital Service began international health cooperation.

1904—The Hygienic Laboratory moved to a new building on a 5-acre tract at 25th and E Streets NW., Washington, D.C., on March 16.

1906—Medical care for merchant seamen and other beneficiaries of the Public Health and Marine Hospital Service began to be supported by direct congressional appropriations with the repeal of the tonnage tax on June 30.

1909—Dr. John F. Anderson was appointed Director of the Hygienic Laboratory on October 1.

1912—Dr. Rupert Blue was appointed Surgeon General of the Public Health and Marine Hospital Service on January 13.

The name "Public Health and Marine Hospital Service" was changed to "Public Health Service" on August 14, and the research program was expanded to include problems other than communicable diseases.

1914—Dr. Joseph Goldberger announced his views of pellagra as a dietary deficiency, emphasizing the importance of dietary deficiency diseases.

1915—Dr. George W. McCoy was appointed Director of the Hygienic Laboratory on November 20.

1918—The Chamberlain-Kahn Act, passed July 9, provided for the study of venereal diseases. The Public Health Service made grants to 25 institutions, establishing a precedent for the Federal Government to seek assistance of scientists through grants.

The Public Health Service Reserve Corps was established by law on October 27, during the influenza pandemic, as a means of coping with the emergency situation.

1920—Dr. Hugh Smith Cumming was appointed Surgeon General of the Public Health Service on March 3.

1921—The Rocky Mountain Spotted Fever Laboratory was established in a former school building in Hamilton, Mont., on September 20 as a recognized field station of the Public Health Service.

1922—A Special Cancer Investigations Laboratory was established by Public Health Service investigators at Harvard Medical School on August 1.

1929—On January 19, the Narcotics Control Act was passed providing for construction of two hospitals for drug addicts and authorizing a Narcotics Division in the Public Health Service.

1930—Under Public Law 71–106, passed April 9, the Advisory Board for the Biologics Control Division became the National Advisory Health Council.

On May 26 the Ransdell Act redesignated the Hygienic Laboratory as the National Institute of Health, authorizing $750,000 for construction of two buildings for NIH, and creating a system of fellowships.

On June 14, Public Law 357 authorized creation of a separate Bureau of Narcotics in the Treasury Department and changed the Narcotics Division of the Public Health Service to the Division of Mental Hygiene. The law gave the Surgeon General authority to investigate the causes, treatment, and prevention of mental and nervous diseases.

1935—A narcotic "farm" at Lexington, Ky., was completed and opened on May 29.

On August 10, Mr. and Mrs. Luke I. Wilson made the first gift of 45 acres of their estate "Tree Tops" for use of the National Institute of Health in Bethesda, Md.

Title VI of the Social Security Act, passed August 14, authorized the expenditure of up to $2 million on health grants to the States for the "investigation of disease problems of sanitation."

1936—Dr. Thomas Parran was appointed Surgeon General of the Public Health Service on April 6.

1937—The Rocky Mountain Laboratory became part of the National Institute of Health, and was administratively made part of the Division of Infectious Diseases in February.

Dr. Lewis R. Thompson was appointed Director of the National Institute of Health on February 1.

Congress authorized the National Cancer Institute on August 5. The bill was introduced in the Senate under the names of all 96 Senators.

1938—The National Advisory Cancer Council recommended approved of the first awards for fellowships in cancer research on January 3.

Mrs. Luke I. Wilson made the second gift of 10.7 acres of land to NIH on May 28.

The cornerstone for Building 1 was laid June 30.

Congress authorized construction of new, larger laboratory facilities and NIH moved to Bethesda, Md., in July.

Mrs. Luke I. Wilson made the third gift of 14.4 acres of land to NIH on September 30.

The narcotics hospital at Fort Worth, Tex., was dedicated on October 28.

1939—Under a Reorganization Act, dated April 3, the Public Health Service was transferred from the Treasury Department to the Federal Security Agency.

1940—Mrs. Luke I. Wilson made the fourth gift of 11.6 acres of land to NIH on September 27.

1942—Dr. Rolla Eugene Dyer was appointed Director of the National Institute of Health on February 1.

The final gift of land was made by Mrs. Luke I. Wilson on March 17 bringing the total to 92 acres. This was the nucleus of the present 306-acre reservation. The additional land was acquired through a series of purchases.

1943—NIH was given bureau status in the Public Health Service on November 11.

1944—The Public Health Service Act was approved on July 1, consolidating and revising existing public health legislation, and giving NIH the legislative basis for its postwar program with general authority to conduct research.

1946—The Research Grants Office was created at NIH in January to administer the Office of Scientific Research and Development projects transferred to the Public Health Service at the end of World War II, and to operate a program of extramural research grants and fellowship awards.

The National Mental Health Act was passed July 3. (See "Legislative Chronology.")

On August 12, the Research Grants Office became the Research Grants Division (later renamed "Division of Research Grants.")

The Hospital Survey and Construction Act, introduced by Senators Lister Hill and Harold H. Burton, was passed on August 13, authorizing the Hill-Burton program. (See "Legislative Chronology.")

1948—Dr. Leonard A. Scheele was appointed Surgeon General of the Public Health Service on April 6.

The National Heart Act was signed which authorized the National Heart Institute and changed the name of the National *Institute* of Health to National *Institutes* of Health on June 16.

The National Dental Research Act, passed June 24, authorized the National Institute of Dental Research.

The National Heart Institute was established August 1.

The National Institute of Dental Research was established September 16.

Construction of the NIH Clinical Center was started in November.

The National Microbiological Institute and the Experimental Biology and Medicine Institute were established on November 1.

The Rocky Mountain Laboratory became one of the four components of the National Microbiological Institute on November 1.

1949—The purchase of 115.8 acres from the Town & Country Golf Club, Inc., for a total of $600,000 was concluded February 11.

The purchase of 47.9 acres of land for a total of $505,000 was concluded on February 14.

The National Institute of Mental Health was established on April 15, with the abolishment of the Division of Mental Hygiene.

The first issue of the NIH *Record* was published May 20.

The purchase of 50.2 acres of land from the Sisters of the Visitation for a total of $173,058 was concluded on June 28.

1950—The Omnibus Medical Research Act, signed August 15, authorized the National Institute of Neurological Diseases and Blindness and the National Institute of Arthritis and Metabolic Diseases, the latter absorbing the Experimental Biology and Medicine Institute. The act also gave the Surgeon General authority to establish new institutes.

Dr. William H. Sebrell, Jr., was appointed Director of the National Institutes of Health on October 1.

The National Institute of Neurological Diseases and Blindness and the National Institute of Arthritis and Metabolic Diseases were established November 22.

1951—The first Dyer Lecture was given by Dr. George W. Beadle of the California Institute of Technology on June 21.

President Harry S. Truman laid the Clinical Center cornerstone on June 22.

1953—The first NIH Lecture was given on January 21 by Dr. Severo Ochoa of New York University College of Medicine.

The Public Health Service became part of the newly created Department of Health, Education, and Welfare on April 11.

The NIH Clinical Center was dedicated on July 2, extending the clinical dimension of the Public Health Service research programs.

The first patient was admitted to the NIH Clinical Center on July 6.

1954—The NIH Graduate School Program began on September 27.

1955—The biologics control function was placed in the newly formed Division of Biologics Standards in June. The Division of Research Services and Division of Business Operations were also formed.

The Cancer Chemotherapy National Service Center was established April 1 to coordinate the first national cancer chemotherapy program.

The Mental Health Study Act was passed July 28. (See "Legislative Chronology.")

Dr. James A. Shannon was appointed Director of the National Institutes of Health on August 1.

The National Microbiological Institute became the National Institute of Allergy and Infectious Diseases by order of the Surgeon General on December 29.

1956—The National Health Survey Act was passed July 3. (See "Legislative Chronology.")

The Alaska Mental Health Enabling Act was passed July 28. (See "Legislative Chronology.")

The Health Research Facilities Act was passed July 30. (See "Legislative Chronology.")

The Health Amendments Act of 1956 was passed August 2. (See "Legislative Chronology.")

Dr. Leroy E. Burney was appointed Surgeon General of the Public Health Service on August 8.

The National Library of Medicine was established with the transfer of function from the Armed Forces Medical Library on October 1.

1957—The NIH Center for Aging Research was established November 27 as the focal center for NIH extramural activities in gerontology.

1958—On July 16 the Division of General Medical Sciences was established by order of the Surgeon General extending research into noncategorical areas operated until that time by the Division of Research Grants.

The NIH Center for Aging Research was transferred from the National Heart Institute to the Division of General Medical Sciences on November 4.

1959—The Office of Administrative Management was formed July 15, consolidating the Division of Business Operations and other managerial responsibilities.

1960—The International Health Research Act was passed July 12, extending NIH international programs. (See "Legislative Chronology.")

Public Law 86–798 amending the Public Health Service Act was passed September 15. (See "Legislative Chronology.")

1961—The Center for Research in Child Health was established by the Surgeon General in the Division of General Medical Sciences on February 17.

Dr. Luther L. Terry was appointed Surgeon General of the Public Health Service on March 24.

The NIH European Office was established in Paris, France, on December 18.

1962—The NIH Latin American Office was established in Rio de Janeiro, Brazil, on July 1.

The Division of Research Facilities and Resources was established July 15.

Public Law 87–838, passed October 17, authorized the National Institute of Child Health and Human Development and changed the Division of General Medical Sciences to the National Institute of General Medical Sciences.

1963—The NIH Pacific Office was established in Tokyo, Japan, on January 1.

The National Institute of Child Health and Human Development and the National Institute of General Medical Sciences were established on January 30.

The new surgical wing for the NIH Clinical Center was dedicated September 5.

Public Law 88–129, passed September 24, amended the Health Research Facilities Act of 1956. (See "Legislative Chronology.")

The Maternal and Child Health and Mental Retardation Planning Amendments of 1963 were passed on October 24. (See "Legislative Chronology.")

The first NIH International Lecture was given October 31 by Dr. Walsh McDermott of Cornell University Medical College.

The Mental Retardation Facilities and Community Mental Health Centers Construction Act was passed on October 31. (See "Legislative Chronology.")

1964—A special virus-cancer-leukemia program was initiated under a special appropriation, included in the fiscal year 1965 appropriation bill signed into law on September 19, to expand and intensify research on viruses and leukemia and related diseases. This program is based on the conviction that there now exists sufficient scientific knowledge and technical capability to plan and carry out an intensified, coordinated, and integrated research effort. (For details, see "Special Programs of NCI.")

IMPORTANT EVENTS IN THE HISTORY OF NIH (By Month and Day)

January—The Research Grants Office was created at NIH in 1946 to administer the Office of Scientific Research and Development projects transferred to the Public Health Service at the end of World War II and to operate a program of extramural research grants and fellowship awards.

January 1—The NIH Pacific Office was established in Tokyo, Japan, in 1963.

January 3—The National Advisory Cancer Council recommended approval of the first awards for fellowships in cancer research in 1938.

January 4—The Public Health Service Commissioned Corps was authorized in 1889, establishing by law the policy of a mobile corps subject to duty anywhere upon assignment.

January 13—Dr. Rupert Blue was appointed Surgeon General of the Public Health Service in 1912.

January 19—The Narcotics Control Act was passed by Congress in 1929 providing for construction of two hospitals for drug addicts and authorizing a Narcotics Division in the Public Health Service.

January 21—The first NIH lecture was given by Dr. Severo Ochoa of New York University College of Medicine in 1953.

January 30—The National Institute of Child Health and Human Development and the National Institute of General Medical Sciences were established in 1963.

February—The Rocky Mountain Laboratory became part of the National Institute of Health, and was administratively made part of the Division of Infectious Diseases in 1937.

February 1—Dr. Lewis R. Thompson was appointed Director of the National Institute of Health in 1937.

Dr. Rolla E. Dyer was appointed Director of the National Institute of Health in 1942.

February 11—The purchase of 115.8 acres from the Town & Country Golf Club, Inc., for a total of $600,000 was concluded in 1949.

February 14—The purchase of 47.9 acres of land for a total of $505,000 was concluded in 1949.

February 15—A new Quarantine Act, passed in 1893, strengthened the Quarantine Act of 1878.

February 17—The Center for Research in Child Health was established by the Surgeon General in the Division of General Medical Sciences in 1961.

March 2—The Marine Hospital Act was extended to include officers and men of the U.S. Navy in 1799.

The Marine Hospital Service was directed by Congress to investigate leprosy in the United States in 1899.

March 3—A bill was passed in 1875 which authorized the admission of Navy seamen and seamen of other Government services to Marine hospitals on a reimbursable basis.

In recognition of the progress Dr. John Maynard Woodworth made in reorganizing the Marine Hospital Service, his title was changed by law to Supervising Surgeon General in 1875.

The National Board of Health was created by law in 1879. It represented the first organized, comprehensive, national medical research effort of the Federal Government.

Dr. Hugh Smith Cumming was appointed Surgeon General of the Public Health Service in 1920.

March 16—The Hygienic Laboratory moved to its own building on a 5-acre site near E and 25th Streets in Washington, D.C., in 1904.

March 17—The final gift of land was made by Mrs. Luke I. Wilson in 1942 bringing the total to 92 acres. This was the nucleus of the present 306-acre reservation. The additional land was acquired through a series of purchases.

March 24—Dr. Luther L. Terry was appointed Surgeon General of the Public Health Service in 1961.

March 27—Congress gave the Marine Hospital Service interstate quarantine authority in 1890.

April 1—The Cancer Chemotherapy National Service Center was established in 1955 to coordinate the first national cancer chemotherapy program.

April 3—Dr. John B. Hamilton was appointed Surgeon General of the Marine Hospital Service in 1879.

The Public Health Service was transferred from the Treasury Department to the Federal Security Agency under a reorganization act in 1939.

April 6—Dr. Thomas Parran was appointed Surgeon General of the Public Health Service in 1936.

Dr. Leonard A. Scheele was appointed Surgeon General of the Public Health Service in 1948.

April 9—Under Public Law 71–106, passed in 1930, the Advisory Board for the Biologics Control Division became the National Advisory Health Council.

April 11—The Public Health Service became part of the newly created Department of Health, Education, and Welfare in 1953.

April 15—The National Institute of Mental Health was established in 1949 with the abolishment of the Division of Mental Hygiene.

April 29—The first Federal Quarantine Act was passed in 1878.

May 1—Dr. Milton J. Rosenau was appointed Director of the Hygienic Laboratory in 1899.

May 3—The admission of foreign seamen to Marine hospitals on a reimbursable basis was authorized in 1802.

The first permament Marine hospital was authorized to be built in Boston, Mass., in 1803.

May 20—The first issue of the *NIH Record* was published in 1949.

May 26—In 1930 the Hygienic Laboratory became the National *Institute* of Health under the Ransdell Act, which also authorized $750,000 for construction of two buildings for NIH, and authorized creation of a system of fellowships.

May 28—Mrs. Luke I. Wilson made the second gift of 10.7 acres of land to NIH in 1938.

May 29—A narcotic "farm" at Lexington, Ky., was completed and opened in 1935.

June—The Hygienic Laboratory moved from Staten Island, N.Y., to Butler Building, Service Headquarters, Washington, D.C., in 1891.

The biologics control function was placed in the newly formed Division of Biologics Standards in 1955. The Division of Research Services and Division of Business Operations were also formed.

June 1—Dr. Walter Wyman was appointed Surgeon General of the Marine Hospital Service in 1891.

June 14—In 1930, Public Law 357 authorized creation of a separate Bureau of Narcotics in the Treasury Department and changed the Narcotics Division of the Public Health Service to the Division of Mental Hygiene. The law gave the Surgeon General authority to investigate the causes, treatment, and prevention of mental and nervous diseases.

June 16—The National Heart Act was signed which authorized the National Heart Institute and changed the name of the National *Institute* of Health to National *Institutes* of Health in 1948.

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June 22—President Harry S. Truman laid the Clinical Center cornerstone in 1951.

June 24—The National Dental Research Act, passed in 1948, authorized the National Institute of Dental Research.

June 28—The purchase of 50.2 acres of land from the Sisters of Visitation for a total of $173,058 was concluded in 1949.

June 29—A bill passed in 1870 provided for administration of Marine Hospitals within a Bureau of the Treasury Department with a medical officer in charge.

June 30—Medical care for merchant seamen and other beneficiaries of the Public Health and Marine Hospital Service began to be supported by direct congressional appropriations with the repeal of the tonnage tax in 1906.

The cornerstone for Building 1 was laid in 1938.

July—Congress authorized construction of new, larger NIH laboratory facilities and NIH moved to Bethesda, Md., in 1938.

July 1—The seamen's hospital tax was abolished in 1884 and the cost of maintaining Marine hospitals was paid out of a tonnage tax, a practice which continued until 1906.

The Biologics Control Act, passed in 1902, gave the Public Health and Marine Hospital Service responsibility for licensing and regulating the interstate sale of biologic products applicable to the diseases of man, and established the Biologics Control Division.

The Advisory Board for the Biologics Control Division established in 1902. It later became the National Advisory Health Council.

A bill approved in 1902 changed the name of the Marine Hospital Service to the "Public Health and Marine Hospital Service."

The Public Health Service Act was approved in 1944, consolidating and revising existing public health legislation, and giving NIH the legislative basis for its postwar program with general authority to conduct research.

The NIH Latin American Office was established in Rio de Janeiro, Brazil, in 1962.

July 2—The NIH Clinical Center was dedicated in 1953, extending the clinical dimension of the Public Health Service research programs.

July 3—The National Mental Health Act, passed in 1946, provided for research support and community mental health services.

The National Health Survey Act was passed in 1956.

July 6—The first patient was admitted to the NIH Clinical Center in 1953.

July 9—The Chamberlain-Kahn Act, passed in 1918, provided for the study of venereal diseases. The Public Health Service made grants to 25 institutions, establishing a precedent for the Federal Government to seek assistance of scientists through grants.

July 12—The International Health Research Act was passed in 1960, extending NIH international programs.

July 15—The Office of Administrative Management was formed in 1959, consolidating the Division of Business Operations and other managerial responsibilities.

The Division of Research Facilities and Resources was established in 1962.

July 16—The Marine Hospital Service was established with the signing by President John Adams of an act for the relief of sick and disabled seamen in 1798.

In 1958 the Division of General Medical Sciences was established by order of the Surgeon General, extending research into noncategorical areas operated until that time by the Division of Research Grants.

July 28—The Mental Health Study Act was passed in 1955. (See "Legislative Chronology")

The Alaska Mental Health Enabling Act was passed in 1956. (See "Legislative Chronology")

July 30—The Health Research Facilities Act was passed in 1956. (See "Legislative Chronology")

August—A bacteriological laboratory, known as the "Laboratory of Hygiene" was established under Dr. James J. Kinyoun at the Marine Hospital, Staten Island, N.Y., in 1887 for research on cholera and other infectious diseases. (Redesignated "Hygienic Laboratory," 1891.)

August 1—A Special Cancer Investigations Laboratory was established by Public Health Service investigators at Harvard Medical School in 1922.

The National Heart Institute was established in 1948.

Dr. James A. Shannon was appointed Director of the National Institutes of Health in 1955.

August 2—The Health Amendments Act of 1956 was passed. (See "Legislative Chronology")

August 5—Congress authorized the National Cancer Institute in 1937. The bill was introduced in the Senate under the names of all 96 Senators.

August 8—Dr. Leroy E. Burney was appointed Surgeon General of the Public Health Service in 1956.

August 10—Mr. and Mrs. Luke I. Wilson made the first gift of 45 acres of their estate "Tree Tops" for use of the National Institute of Health in Bethesda, Md., in 1935.

August 12—In 1946, the Research Grants Office became the Research Grants Division (later renamed "Division of Research Grants").

August 13—The Hospital Survey and Construction Act, introduced by Senators Lister Hill and Harold H. Burton, was passed in 1946 authorizing the Hill-Burton program. (See "Legislative Chronology")

August 14—The name "Public Health and Marine Hospital Service" was changed to "Public Health Service" in 1912, and the research program was expanded to include problems other than communicable diseases.

Title VI of the Social Security Act, passed in 1935, authorized the expenditure of up to $2 million in health grants to the States for the "investigation of disease and problems of sanitation."

August 15—The Omnibus Medical Research Act, passed in 1950, authorized the National Institute of Neurological Diseases and Blindness and the National Institute of Arthritis and Metabolic Diseases, the latter absorbing the Experimental Biology and Medicine Institute. The act also gave the Surgeon General authority to establish new institutes.

September 5—The new surgical wing for the NIH Clinical Center was dedicated in 1963.

September 15—Public Law 86–798, amending the Public Health Service Act, was passed in 1960. (See "Legislative Chronology.")

September 16—The National Institute of Dental Research was established in 1948.

September 19—A special virus-cancer-leukemia program was initiated under a special appropriation, included in fiscal year 1965 appropriation bill signed into law in 1964, to expand and intensify research on viruses and leukemia and related diseases. This program is based on the conviction that there now exists sufficient scientific knowledge and technical capability to plan and carry out an intensified, coordinated and integrated research effort. (For details see "Special Programs of NCI.")

September 20—The Rocky Mountain Spotted Fever Laboratory was established in a former school building in Hamilton, Mont., in 1921 as a recognized field station of the Public Health Service.

September 24—Public Law 88–129, passed in 1963, amended the Health Research Facilities Act of 1956. (See "Legislative Chronology.")

September 27—Mrs. Luke I. Wilson made the fourth gift of 11.6 acres of land to NIH in 1940.

The NIH Graduate School program began in 1954.

September 30—Mrs. Luke I. Wilson made the third gift of 14.4 acres of land to NIH in 1938.

October 1—Regulations were approved in 1873 for appointment of physicians in the Marine Hospital Service, establishing the first career service for civilian employees in the Federal Government.

Dr. John F. Anderson was appointed Director of the Hygienic Laboratory in 1909.

Dr. William H. Sebrell, Jr., was appointed Director of the National Institutes of Health in 1950.

The National Library of Medicine was established with the transfer of function from the Armed Forces Medical Library in 1956.

October 17—Public Law 87–838, passed in 1962, authorized the National Institute of Child Health and Human Development and changed the Division of General Medical Sciences to the National Institute of General Medical Sciences.

October 24—The Maternal and Child Health and Mental Retardation Planning Amendments of 1963 were passed. (See "Legislative Chronology.")

October 27—The Public Health Service Reserve Corps was established in 1918 during the influenza pandemic as a means of coping with the emergency situation.

October 28—The narcotics hospital at Fort Worth, Tex., was dedicated in 1938.

October 31—The first NIH International Lecture was given in 1963 by Dr. Walsh McDermott of Cornell University Medical College.

The "Mental Retardation Facilities and Community Mental Health Centers Construction Act was passed in 1963. (See "Legislative Chronology.")

November—Construction of the NIH Clinical Center was started in 1948.

November 1—The National Microbiological Institute and the Experimental Biology and Medicine Institute were established in 1948.

The Rocky Mountain Laboratory became one of the four components of the National Microbiological Institute in 1948.

November 4—The NIH Center for Aging Research was transferred from the National Heart Institute to the Division of General Medical Sciences in 1958.

November 11—NIH was given bureau status in the Public Health Service in 1943.

November 20—Dr. George W. McCoy was appointed Director of the Hygienic Laboratory in 1915.

November 22—The National Institute of Arthritis and Metabolic Diseases and the National Institute of Neurological Diseases and Blindness were established in 1950.

November 27—Dr. Benjamin Waterhouse was appointed physician in charge of the Boston Marine Hospital in 1807. He was the first to introduce interns and residents into hospitals in the United States.

The NIH Center for Aging Research was established in 1957 as the focal center for NIH extramural activities in gerontology.

December 2—The Pan American Sanitary Bureau was established in 1902. The Public Health and Marine Hospital Service began international health cooperation.

December 18—The NIH European Office was established in Paris, France, in 1961.

December 21—Congress appropriated funds "for investigating the origin and causes of epidemic diseases, especially yellow fever and cholera," in 1878.

December 29—The National Microbiological Institute became the National Institute of Allergy and Infectious Diseases by order of the Surgeon General in 1955.

LEGISLATIVE CHRONOLOGY

This legislative chronology is limited to enactments that had a major influence upon the Marine Hospital Service as it evolved into the Public Health Service, to legislation leading to the establishment of the National Institutes of Health, and to specific NIH legislation with the exception of appropriations bills.

July 16, 1798—"An Act for the relief of sick and disabled Seamen" established the Marine Hospital Service for merchant seamen. The Marine Hospital Service—forerunner of the present-day Public Health Service—became a component of the Treasury Department. A monthly hospital tax of 20 cents was deducted from the pay of merchant seamen in the first prepaid medical care plan in the United States. (Stat. L. 604.)

March 2, 1799—An amending act to the legislation of 1798 extended Marine Hospital Service benefits to officers and men of the U.S. Navy. This arrangement continued until 1818 when the Navy built its own hospitals. However, the deduction of 20 cents per month from the pay of Navy and Marine Corps personnel continued until June 15, 1943. (1 Stat. L. 729.)

June 29, 1870—A bill to reorganize the Marine Hospital Service and establish a central controlling office in Washington, D.C., was enacted. This act also increased the amount of hospital tax paid by seamen from 20 cents to 40 cents per month, a tax which continued until 1884. (16 Stat. L. 169.) (After the seamen's hospital tax was abolished July 1, 1884, the cost of maintaining Marine hospitals was paid out of a tonnage tax until 1906. Since then medical care for merchant seamen and other beneficiaries of the Service has been supported by direct congressional appropriations.)

March 3, 1875—An act was passed authorizing the admission of seamen from the Navy and other Government services to Marine hospitals on a reimbursable basis. (18 Stat. L. 377.)

April 29, 1878—The first Federal Quarantine Act "to prevent the introduction of contagious or infectious diseases into the United States" was passed. (20 Stat. L. 37.)

January 4, 1889—A bill to establish a commissioned officer corps in the Marine Hospital Service was passed. This law established a mobile corps subject to duty anywhere upon assignment, a policy that had been in effect since Dr. Woodworth assumed leadership of the Marine Hospital Service in 1871. (25 Stat. L. 639.)

March 27, 1890—Congress gave the Marine Hospital Service interstate quarantine authority. (26 Stat. L. 31.)

February 15, 1893—A new Quarantine Act was passed, following outbreaks of cholera in Europe, strengthening the inadequate Quarantine Act of 1878 by giving the Federal Government the right of quarantine inspection. (27 Stat. L. 449.)

March 2, 1899—The Marine Hospital Service was directed by Congress to investigate leprosy in the United States. (30 Stat. L. 976.)

July 1, 1902—A bill to increase the efficiency and change the name of the Marine Hospital Service to "Public Health and Marine Hospital Service" was enacted. The law authorized the establishment of specified administrative divisions, and, for the first time, designated a bureau of the Federal Government as an agency in which public health matters could be coordinated. (32 Stat. L. 712.)

Another law, usually referred to as the Biologics Control Act, authorized the Public Health and Marine Hospital Service to regulate the transportation or sale for human use of viruses, serums, vaccines, antitoxins, and analogous products in interstate traffic or from any foreign country into the United States. (Public Law 57–244, 32 Stat. L. 728.)

August 14, 1912—Under an act, the name "Public Health and Marine Hospital Service" was changed to "Public Health Service." The legislation also authorized the Public Health Service to conduct field investigations and studies and, in particular, investigations of the diseases of man and pollution of navigable streams. (37 Stat. L. 309.)

July 9, 1918—The Chamberlain-Kahn Act provided for the study of venereal diseases by the Public Health Service. (40 Stat. L. 886.)

October 27, 1918—An act establishing a Reserve Corps for the Public Health Service was passed. The 1918 influenza pandemic emphasized the need for a reserve corps in the Service to meet such emergency situations. (40 Stat. L. 1017.)

January 19, 1929—The Narcotics Control Act provided for construction of two hospitals for the care and treatment of drug addicts, and authorized creation of a Narcotics Division in the Office of the Surgeon General of the Public Health Service. (Public Law 70–672, 45 Stat. L. 1085.)

April 9, 1930—A law changed the name of the Advisory Board for the Hygienic Laboratory to the National Advisory Health Council. (Public Law 71–106, 46 Stat. L. 152.)

May 26, 1930—The Ransdell Act reorganized, expanded, and redesignated the Hygienic Laboratory as the National Institute of Health. The act authorized $750,000 for the construction of two buildings for NIH and authorized the establishment of a system of fellowships. (Public Law 71–251, 46 Stat. L. 379.)

June 14, 1930—A law authorized creation of a separate Bureau of Narcotics in the Treasury Department to control trading in and use of narcotic drugs for therapeutic purposes. Also, the legislation changed the Narcotics Division of the Public Health Service to the Division of Mental Hygiene, giving the Surgeon General authority to investigate the causes, treatment, and prevention of mental and nervous diseases. (Public Law 71–357, 46 Stat. L. 585.)

August 14, 1935—The Social Security Act was an event of major importance in the progress of public health in the United States. This act authorized health grants to the States on the principle that the most effective way to prevent the interstate spread of disease is to improve State and local public health programs. With this legislation, the Public Health Service became adviser and practical assistant to State and local health services. (Public Law 74–271, 49 Stat. L. 634.)

August 5, 1937—A law established the National Cancer Institute to conduct and support research relating to the cause, diagnosis, and treatment of cancer. The law authorized the Surgeon General to make grants-in-aid for research projects in the field of cancer, provide fellowships, train personnel, and assist the States in their efforts toward cancer prevention and control. (Public Law 75–244, 50 Stat. L. 559.)

April 3, 1939—The Reorganization Act of 1939 transferred the Public Health Service from the U.S. Treasury Department to the Federal Security Agency. (Public Law 76–19, 53 Stat. L. 561.)

July 1, 1944—The Public Health Service Act consolidated and revised laws pertaining to the Public Health Service and divided the Service into the Office of the Surgeon General, Bureau of Medical Services, Bureau of State Services, and the National Institute of Health. The act gave the Surgeon General broad powers to conduct and support research into the diseases and disabilities of man, authorized projects and fellowships, and made the National Cancer Institute a division of NIH. The act also empowered the Surgeon General to treat at Public Health Service medical facilities, for purposes of study, persons not otherwise eligible for such treatment. (Public Law 78–410, 58 Stat. L. 682.) Under this provision, the Clinical Center was later established.

July 3, 1946—The National Mental Health Act was designed to improve the mental health of U.S. citizens through research into the causes, diagnosis, and treatment of psychiatric disorders. It authorized the Surgeon General to support research, training, and assistance to State mental health programs. (Public Law 79–487, 60 Stat. L. 421.) (The National Institute of Mental Health was established under the authority of this law on April 1, 1949.)

August 13, 1946—The Hospital Survey and Construction Act (Hill-Burton Act) authorized grants to the States for construction of hospitals and public health

centers, for planning construction of additional facilities, and for surveying existing hospitals and other facilities. (Public Law 79–725, 60 Stat. L., 1040.)

June 16, 1948—The National Heart Act authorized the National Heart Institute to conduct, assist, and foster research; provide training; and assist the States in the prevention, diagnosis, and treatment of health diseases. In addition, the act changed the name of National *Institute* of Health to National *Institutes* of Health. (Public Law 80–655, 62 Stat. L. 464.)

June 24, 1948—The National Dental Research Act authorized the National Institute of Dental Research to conduct, assist, and foster dental research; provide training; and cooperate with the States in the prevention and control of dental diseases. (Public Law 80–755, 62 Stat. L. 598.)

August 15, 1950—The Omnibus Medical Research Act authorized the Surgeon General to establish the National Institute of Neurological Diseases and Blindness, as well as additional institutes, to conduct and support research and research training relating to other diseases and groups of diseases. (Public Law 81–692, 64 Stat. L. 443.) (The National Institute of Arthritis and Metabolic Diseases and the National Institute of Neurological Diseases and Blindness were established under the authority of this act on November 22, 1950. Under this same act, the National Institute of Allergy and Infectious Diseases was established on December 29, 1955, replacing the National Microbiological Institute which was originally established November 1, 1948, under authority of section 202 of the Public Health Service Act.)

July 28, 1955—The Mental Health Study Act authorized the Surgeon General to award grants to nongovernmental organizations for partial support of a nationwide study and reevaluation of the problems of mental illness. Under this act, the Joint Committee on Mental Illness and Health was awarded grant support for 3 years. (Public Law 84–182, 69 Stat. L. 381.)

July 3, 1956—The National Health Survey Act authorized the Surgeon General to survey sickness and disabilities in the United States on a sampling basis. (Public Law 84–652, 70 Stat. L. 489.)

July 28, 1956—The Alaska Mental Health Enabling Act provided for territorial treatment facilities to eliminate the need to transport the mentally ill outside Alaska. It also authorized Public Health Service grants to Alaska for its mental health program. (Public Law 84–830, 70 Stat. L. 709.)

July 30, 1956—The Health Research Facilities Act of 1956 authorized a Public Health Service program of Federal matching grants to public and nonprofit institutions for the construction of health research facilities. (Public Law 84–835, 70 Stat. L. 717.)

August 2, 1956—The Health Amendments Act of 1956 authorized the Surgeon General to assist in increasing the number of adequately trained nurses and professional public health personnel. It also authorized Public Health Service grants to support the development of improved methods of care and treatment of the mentally ill. (Public Law 84–911, 70 Stat. L. 923.)

July 12, 1960—Recognizing the importance of cooperation in international health research, Congress passed the International Health Research Act. Under the new law the Surgeon General was authorized to establish and make grants for fellowships in the United States and participating foreign countries; make grants or loans of equipment and other materials to participating foreign countries for use by public or nonprofit institutions and agencies; participate in international health meetings, conferences, and other activities; and facilitate the interchange of research scientists and experts between the United States and participating foreign countries. (Public Law 86–610, 74 Stat. L. 364.)

September 15, 1960—A law amended the Public Health Service Act to authorize grants-in-aid to universities, hospitals, laboratories, and other public and nonprofit institutions, and to strengthen their programs of research and research training in the sciences related to health. The act also authorized the use of funds appropriated for research or research training to be set aside by the Surgeon General in a special account for General Research Support Grants. (Public Law 86–798, 74 Stat. L. 1053.)

October 17, 1962—An act authorized the Surgeon General to establish the National Institute of General Medical Sciences and the National Institute of Child Health and Human Development. The lat-

ter was authorized to conduct and support research and training relating to maternal health; child health; human development, in particular the special health problems of mothers and children; and the basic sciences relating to the processes of human growth and development. The former was authorized to conduct and support research in the basic medical sciences and related behavioral sciences which have significance for two or more institutes, or which are outside the general area of responsibility of any other institute. (Public Law 87–838, 76 Stat. L. 1072.) (On January 30, 1963, the National Institute of Child Health and Human Development and the National Institute of General Medical Sciences were established under this act.)

September 24, 1963—A law amended the Health Research Facilities Act of 1956 (title VII to the Public Health Service Act) to allow grants for multipurpose facilities that would provide teaching space as well as essential research space. (Public Law 88–129, 77 Stat. L. 164.)

October 24, 1963—The Maternal and Child Health and Mental Retardation Planning Amendments of 1963 amended the Social Security Act of 1935 by authorizing a five-point grant program of $265 million over a 5-year period. Major provisions, designed to prevent mental retardation, included increased Federal grants for maternal and child health services and crippled children's services administered by the Children's Bureau; a new 5-year program of grants to the States for health care of expectant mothers who have, or are likely to have, conditions associated with childbearing which may lead to mental retardation; funds for research to improve maternal and child health and crippled children's services; and grants to the States to assist in developing plans for comprehensive State and community programs to combat mental retardation. (Public Law 88–156, 77 Stat. L. 273.)

October 31, 1963—A companion measure to Public Law 88–156 was the "Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963." This act authorized a total of $329 million over a 5-year period for grants to assist in the construction of mental retardation research centers and community mental health centers, and to train teachers of mentally retarded and other handicapped children. (Public Law 88–164, 77 Stat. L. 282.)

August 18, 1964—The Hospital and Medical Facilities Amendments of 1964 extended the Hospital Survey and Construction Act of 1946 (Hill-Burton Act) for 5 years with a total authorization of $1.4 billion. (Public Law 88–443.)

August 27, 1964—The Graduate Public Health Training Amendments of 1964 extended the authorization for public health traineeships and training grants to schools of public health, nursing, and engineering for 5 years, through June 30, 1969. (Public Law 88–497.)

DIRECTORS OF THE NATIONAL INSTITUTES OF HEALTH

Name	*Date of birth*	*Dates of office*	*Date of death*
Joseph J. Kinyoun	Nov. 25, 1860	August 1887 to Apr. 30, 1899[1]	Feb. 14, 1919
Milton J. Rosenau	Jan. 1, 1869	May 1, 1899, to Sept. 30, 1909	Apr. 9, 1946
John F. Anderson	Mar. 14, 1873	Oct. 1, 1909, to Nov. 19, 1915	Sept. 29, 1958
George W. McCoy	June 4, 1876	Nov. 20, 1915, to May 25, 1930; May 26, 1930 to Jan. 31, 1937.[2]	Apr. 2, 1952
Lewis R. Thompson	Aug. 6, 1883	Feb. 1, 1937, to Jan. 31, 1942	Nov. 12, 1954
Rolla E. Dyer	Nov. 4, 1886	Feb. 1, 1942, to June 15, 1948; June 16, 1948, to Sept. 30, 1950.[3]	.....
William H. Sebrell, Jr.	Sept. 11, 1901	Oct. 1, 1950, to July 31, 1955	.....
James A. Shannon	Aug. 9, 1904	Aug. 1, 1955, to present	.....

[1] Director, Hygienic Laboratory.
[2] Director, National Institute of Health.
[3] Director, National Institutes of Health.

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL INSTITUTES OF HEALTH

Joseph James Kinyoun, M.D.

Founder and Director of the Hygienic Laboratory, Dr. Joseph J. Kinyoun introduced scientific research into the Marine Hospital Service. His interest in bacteriology and his isolation of the cholera organism laid the groundwork for the present health research program of the National Institutes of Health.

Born in East Bend, N.C., on November 25, 1860, Dr. Kinyoun received his M.D. degree from New York University in 1882 and did postgraduate work in Europe under the German bacteriologist, Robert Koch.

Dr. Kinyoun joined the Marine Hospital Service in 1886. In a one-room laboratory on Staten Island, N.Y., he applied new techniques he had learned in Europe, enabling him to isolate the organism that causes cholera. The Hygienic Laboratory was established in August 1887 and Dr. Kinyoun served as its Director until April 30, 1899.

During his Government career, Dr. Kinyoun designed the Kinyoun-Francis sterilizer, a shipboard disinfecting apparatus. In 1903 he retired from public service, and after working in private industry and as a professor at the George Washington University, he became a bacteriologist in the District of Columbia Health Department, a post which he held until his death on February 14, 1919.

Milton Joseph Rosenau, M.D.

As second Director of the Hygienic Laboratory, Dr. Milton J. Rosenau was responsible for widely expanding its scope of investigations.

Dr. Rosenau was born in Philadelphia on January 1, 1869. After receiving his M.D. degree from the University of Pennsylvania, he did postgraduate work in Europe in the field of sanitation and public health.

In 1890 he received his commission in the Marine Hospital Service and became Director of the Hygienic Laboratory on May 1, 1899.

A pioneer in the study of anaphylaxis, he also conducted research on yellow fever, malaria, typhoid fever, poliomyelitis, disinfectants, and the pasteurization of milk. His *Preventive Medicine and Hygiene* is a standard text for students of public health.

On September 30, 1909, Dr. Rosenau resigned from Government service to join the staff of Harvard Medical School. In 1936 he went to the University of North Carolina where he served as director of the Public Health School until his death on April 9, 1946.

John F. Anderson, M.D.

Dr. John F. Anderson, third Director of the Hygienic Laboratory, was among the early scientists who made the Laboratory well known in scientific circles.

Dr. Anderson was born in Fredericksburg, Va., March 14, 1873. After receiving his M.D. degree at the University of Virginia, he went abroad to study bacteriology. Upon returning in 1898, he joined the Marine Hospital Service and on October 1, 1909, succeeded Dr. Rosenau as Director of the Hygienic Laboratory.

Throughout his career in the Service, Dr. Anderson was actively engaged in research. He studied serum and vaccine therapy, immunology, cholera, typhus, poliomyelitis, and public health and sanitation problems. He worked with Dr. Milton J. Rosenau on tuberculosis, anaphylaxis, and hypersusceptibility, and with Dr. Joseph Goldberger on the transmission of measles to monkeys, providing science with an experimental animal for that disease.

Dr. Anderson served as Director of the Hygienic Laboratory until November 19, 1915, when he resigned to become director of the Research and Biological Laboratories and later vice president of E. R. Squibb & Sons. He died on September 29, 1958.

George Walter McCoy, M.D.

Dr. George W. McCoy was during his lifetime the Nation's greatest authority on leprosy. For his many contributions to public health, he won the Sedgwick Memorial Medal of the American Public Health Association in 1921.

Born in Cumberland Valley, Pa., on June 4, 1876, he entered the Marine Hospital Service in 1900 after graduating from the University of Pennsylvania Medical School.

During his first assignment at the Marine hospital in San Francisco, he became interested in leprosy. While heading the U.S. Plague Laboratory in San Francisco from 1908 to 1911, he discovered that the California ground squirrel is responsible for the spread of the organism causing tularemia.

On November 20, 1915, he became fourth Director of the Hygienic Laboratory, renamed "National Institute of Health" in 1930. During this period he conducted important studies in influenza, poliomyelitis, smallpox, tularemia, amoebic dysentery, and pneu-

monia. Dr. McCoy served as Director until January 31, 1937.

After conducting a nationwide survey on leprosy, Dr. McCoy retired from the Public Health Service on June 30, 1938, and joined the staff of Louisiana State University in New Orleans. He died on April 2, 1952.

Lewis Ryers Thompson, M.D.

Dr. Lewis R. Thompson was intensely interested in research on industrial health problems and on problems of stream pollution.

Born in Lafayette, Ind., August 6, 1883, he joined the Public Health Service in 1910, having graduated from Louisville Medical College. After becoming Chief of the Division of Scientific Research in 1930, he administered field investigations of stream pollution, malaria, cancer, nutritional diseases, child hygiene, milk, dental problems, and industrial hygiene. When the Division was merged with the National Institute of Health, Dr. Thompson became NIH Director on February 1, 1937.

Dr. Thompson was largely responsible for securing the present-day site of the National Institutes of Health and for securing appropriations for the construction of NIH's first six buildings. He served as Director until January 31, 1942, and after retiring from the Public Health Service in 1947 became a scientific director of the International Health Division of the Rockefeller Foundation. He died on November 12, 1954.

Rolla Eugene Dyer, M.D.

Dr. Rolla E. Dyer's major research contributions were in the field of infectious diseases; in particular, endemic typhus. He demonstrated how endemic typhus is spread and helped develop a vaccine to protect against the disease.

Born in Delaware County, Ohio, November 4, 1886, Dr. Dyer received his M.D. degree from the University of Texas and joined the Public Health Service in 1916.

His first assignment involved fieldwork on bubonic plague in New Orleans. Five years later he joined the staff of the Hygienic Laboratory, became Chief of the Division of Infectious Diseases in 1936, and Director of the National Institute of Health in 1942.

As Director, Dr. Dyer organized the Division of Research Grants, assisted in planning the Clinical Center, and helped establish three new institutes: the National Heart Institute, National Institute of Dental Research, and National Institute of Mental Health.

After retiring from active duty on September 30, 1950, Dr. Dyer served as a member of the Scientific Board of Directors of the International Health Division of the Rockefeller Foundation.

Among his many honors are the Lasker Award and the Sedgwick Memorial Medal of the American Public Health Association.

William Henry Sebrell, Jr., M.D.

A leading international authority on nutrition, Dr. William H. Sebrell first recognized and described the dietary deficiency disease, ariboflavinosis, and made significant contributions to knowledge of dietary needs and deficiencies.

Born in Portsmouth, Va., on September 11, 1901, Dr. Sebrell received his M.D. degree from the University of Virginia and joined the Public Health Service in 1926.

He began his research career under Dr. Joseph Goldberger who demonstrated that pellagra is a deficiency disease. During the 1930's, Dr. Sebrell made many important contributions to our knowledge of the anemias and the role of diet in cirrhosis of the liver.

During World War II, Dr. Sebrell was Codirector of the National Nutrition Program which coordinated activities of all State agencies working in the field of nutrition. This program aided food production and the maintenance of civilian health during the war years.

In 1948 he became Director of the Experimental Biology and Medicine Institute, and on October 1, 1950, was appointed Director of the National Institutes of Health. He held this post until his retirement on July 31, 1955.

Dr. Sebrell helped formulate the first international standards of nutrition for the League of Nations, and pioneered in gaining acceptance of scientific nutrition as a regular function of modern State and local health departments.

James A. Shannon, M.D.

Dr. James A. Shannon, widely recognized in the scientific world for his original research in kidney function, chemotherapy, and malaria, has, throughout his career, been devoted to medical research, teaching, and public service.

Born in Hollis, N.Y., on August 9, 1904, he received his M.D. degree in 1929 and a Ph. D. degree in physiology in 1935 from New York University.

Following his internship at Bellevue Hospital in New York, he taught in the department of physiology at New York University College of Medicine from

1931 to 1941, and directed research at the university's Goldwater Memorial Hospital from 1940 to 1945.

During periods of leave, he served as guest investigator at the physiological laboratory, University of Cambridge, England, and as a member of the staff of the Marine Biological Laboratory at Woods Hole, Mass.

During World War II, Dr. Shannon played a prominent part in malaria research activities of the National Research Council and was consultant on tropical diseases to the Secretary of War. In recognition of this work, he received the Presidential Medal for Merit, the highest award at that time for civilian service in Government.

Before joining the Public Health Service in 1949, Dr. Shannon was director of the Squibb Institute for Medical Research from 1946–49, and special consultant to the PHS Surgeon General.

He then served as Associate Director in charge of research in the National Heart Institute until 1952. After holding the post of Associate Director, NIH, for 3 years, Dr. Shannon became its Director on August 1, 1955.

In 1962 the National Academy of Sciences awarded Dr. Shannon its most distinguished medal, the Public Welfare Medal for "eminence in the application of science to the public welfare." In 1964, Dr. Shannon received the Rockefeller Public Service Award for Science, Technology, or Engineering.

SURGEONS GENERAL OF THE PUBLIC HEALTH SERVICE

Names	*Date of birth*	*Dates of office*	*Date of death*
John Maynard Woodworth..	Aug. 15, 1837	April 1871, to Mar. 14, 1879 [1]....	Mar. 14, 1879
John B. Hamilton.....	Dec. 1, 1847	Apr. 3, 1879, to May 31, 1891 [2]..	Dec. 24, 1898
Walter Wyman.....	Aug. 17, 1848	June 1, 1891, to Nov. 21, 1911 [3]..	Nov. 21, 1911
Rupert Blue.....	May 30, 1867	Jan. 13, 1912, to Mar. 1, 1920 [4]...	Apr. 12, 1948
Hugh Smith Cumming.....	Aug. 17, 1869	Mar. 3, 1920, to Jan. 31, 1936 [5]...	Dec. 20, 1948
Thomas Parran.....	Sept. 28, 1892	Apr. 6, 1936, to Apr. 5, 1948.....	.....
Leonard A. Scheele.....	July 25, 1907	Apr. 6, 1948, to Aug. 2, 1956.....	.....
Leroy E. Burney.....	Dec. 31, 1906	Aug. 8, 1956, to Jan. 29, 1961....	.....
Luther L. Terry.....	Sept. 15, 1911	Mar. 24, 1961, to present.....	.....

[1] Served as Supervising Surgeon of the Marine Hospital Service until Mar. 3, 1875, when his title was changed to Supervising Surgeon General.

[2] Surgeon General, Marine Hospital Service.

[3] Surgeon General, Marine Hospital Service, and Surgeon General, Public Health and Marine Hospital Service (after July 1, 1902).

[4] Surgeon General, Public Health and Marine Hospital Service, and Surgeon General, Public Health Service (after Aug. 14, 1912).

[5] Surgeon General, Public Health Service.

ADMINISTRATORS OF THE FEDERAL SECURITY AGENCY

Name	*Dates of office*
Paul V. McNutt.....	1939–45.
Watson B. Miller.....	1945–47.
Oscar R. Ewing.....	1947–53.
Oveta Culp Hobby.....	January 1953–April 1953.[1]

[1] The Department of Health, Education, and Welfare was established by act of Congress on Apr. 11, 1953.

SECRETARIES OF THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Name	*Dates of office*
Oveta Culp Hobby.....	Apr. 11, 1953–July 31, 1955.
Marion B. Folsom.....	Aug. 1, 1955–July 31, 1958.
Arthur S. Flemming.....	Aug. 1, 1958–Jan. 19, 1961.
Abraham A. Ribicoff.....	Jan. 20, 1961–July 13, 1962.
Anthony J. Celebrezze.....	July 31, 1962–present.

Part II

THE INSTITUTES *and* DIVISIONS

OFFICE OF THE DIRECTOR

Directs the activities of the National Institutes of Health.

Advises the Surgeon General on matters relating to medical research and research training.

Maintains close communication with other bureaus of the Public Health Service and other constituents of the Department of Health, Education, and Welfare in order to provide effective program relationships.

Office of Administrative Management

The Office of Administrative Management provides staff support to insure the availability of people, appropriated funds, space, supplies, communications, and protection for the research and supporting programs at the National Institutes of Health.

The Office oversees the preparation of the NIH budget; disburses and accounts for the funds appropriated to NIH; develops policy in such fields as personnel, property and supply, safety and security of people, property and equipment, and assists NIH organizations in planning and establishing organization structures and in improving management methods and procedures. The Office operates through seven branches:

Financial Management Branch
Management Audit Branch
Management Policy Branch
Office Services Branch
Personnel Management Branch
Plant Safety Branch
Supply Management Branch

Office of International Research

The Office of International Research serves as a staff office of the Director, NIH, providing advice and other assistance concerning international activities to the Office of the Director, as well as Institutes and Divisions.

Another important function is the development of plans, policies, and procedures relating to NIH international biomedical activities.

The Office also carries out certain designated activities related to the International Centers for Medical Research and Training, International Postdoctoral Fellowship Program and Research Grants to Former Fellows, the Visiting Scientist Program, Special Foreign Currency Progrm, International Research Career Development Program, and NIH support to Pakistan-SEATO Cholera Research Laboratory.

The OIR established oversea offices in Paris, Tokyo, and Rio de Janeiro and Science Representatives in London and New Delhi in order to develop a more effective utilization of resources in other countries and to facilitate the administration of NIH international programs.

To assure a balanced effort in the international field, the OIR conducts a continuing review and analysis of its investment in other countries, as well as research-related expenditures of other governments, international organizations, and private foundations.

Office of Program Planning

The Office of Program Planning is organized to assess the continuing growth of medical research in the national setting and apply its findings to future program planning at NIH.

An important area of OPP responsibility is legislative reference and liaison to keep abreast of legislative developments relevant to NIH programs and policies, and to determine the legislative implications of program change and evolution.

Study and evaluation of external factors and trends affecting NIH activities is another function of the Office, particularly the consideration of national resources for medical research—funds, facilities, and manpower.

The analysis of NIH programs and the conduct of special studies dealing with any aspect of the NIH mission are also OPP responsibilities.

Office of Research Information

The Office of Research Information as a part of the Office of the Director dates from 1955. It serves to channel information about medical research and medical research achievements from NIH to the public and to the several professions concerned with health. ORI is responsible for coordinating the information activities of the Institutes, providing staff advice for the Director on information matters, for handling information projects covering the broad scope of NIH activities, and for information liaison with the Public Health Service and the Department of Health, Education, and Welfare.

The Office of Research Information reviews all materials prepared at NIH which are intended for publication—articles, exhibits, scientific reports, leaflets, brochures, news releases, and audiovisual presentations. ORI also publishes the biweekly NIH *Record*.

NATIONAL CANCER INSTITUTE

MISSION OF THE NATIONAL CANCER INSTITUTE

The National Cancer Institute—

Conducts and contracts for research, investigations, experiments, and studies relating to the cause, prevention, and methods of diagnosis and treatment of cancer.

Makes grants-in-aid to universities, hospitals, laboratories, and other public or private nonprofit institutions, and to individuals for research, research training, and research fellowships.

Cooperates and collaborates with State and local health agencies, voluntary organizations, and other institutions and societies engaged in cancer research activities.

Maintains liaison with the Bureau of State Services in planning and developing programs of mutual interest.

Collects and makes available information on cancer.

IMPORTANT EVENTS IN THE HISTORY OF NCI

August 5, 1937—President Franklin D. Roosevelt signed the National Cancer Act.

November 9, 1937—The National Advisory Cancer Council held its first meeting.

November 27, 1937—The Surgeon General awarded first grants-in-aid on the recommendation of the National Advisory Cancer Council.

January 3, 1938—The National Advisory Cancer Council recommended approval of first awards for fellowships in cancer research.

January 13, 1938—Dr. Carl Voegtlin was appointed the first Director of the Institute.

March 28, 1938—Congress passed a resolution authorizing the President of the United States to issue annually a proclamation setting apart the month of April of each year as Cancer Control Month.

October 3, 1938—The Institute held groundbreaking ceremonies for the National Cancer Institute building.

October 6, 1938—The National Advisory Cancer Council recommended approval of the first radium loan.

June 24, 1939—Cornerstone laying ceremonies were held for Building 6.

October 1939—The Institute moved into Building 6.

August 1940—The *Journal of the National Cancer Institute* published its first issue.

October 31, 1940—President Franklin D. Roosevelt dedicated Building 6.

July 1, 1946—The cancer control program was established with appropriations to the States for support of cancer control activities.

NCI's staff was organized into six sections: biology, biochemistry, biophysics, chemotherapy, epidemiology, and pathology.

July 1, 1947—NCI reorganized to provide for expanded program; intramural cancer research, cancer research grants, and cancer control activities.

November 13, 1947—The Research Grants and Fellowship Branch was established.

April 1, 1948—The Environmental Cancer Section was established with the responsibility for research into cancer causation.

October 1948—A grants program to medical, dental, and osteopathic schools was initiated for improvement of training in the field of cancer research, diagnosis, and treatment.

July 2, 1953—NCI inaugurated a full-scale clinical research program in new NIH Clinical Center.

April 1955—The Cancer Chemotherapy National Service Center was established in the Institute to coordinate the first national, voluntary, cooperative cancer chemotherapy program.

November 1959—The *Journal of the National Cancer Institute* inaugurated a series of occasional publications as *Monographs* to be used for longer scientific communications.

September 13, 1960—The Director of NCI appointed an Associate Director for Grants and Training, Associate Director for Field Studies, and Associate Director for Collaborative Research.

November 14, 1960—The Diagnostic Research Branch was established with responsibility for developing techniques for detection and diagnosis of cancer.

January 12, 1961—The Laboratory of Viral Oncology was established encompassing studies on viruses involved in human cancer.

March 28, 1961—The Director of NCI appointed an Associate Director for Program to assist in coordinating program with responsibility for program analysis and planning, and a Director of Intramural Research.

April 21, 1961—The President's Conference on Heart Disease and Cancer was held.

July 7, 1961—The Virology Research Resources Branch was established for development of research materials needed in cancer-virus studies.

April 2, 1962—An exhibit, "Man Against Cancer," opened in Washington, D.C., to commemorate the 25th anniversary of the Institute and inaugurate Cancer Progress Year.

May 7, 1962—The Acute Leukemia Task Force held its first meeting. It focused the combined efforts and resources of scientists on studies of therapy of the acute leukemia patient.

October 25, 1962—The Human Cancer Virus Task Force held its first meeting. The task force was made up of scientists at the Institute and other institutions to try to determine what specific role viruses may play in human cancer causation.

July 1, 1963—The intramural area of NCI was reorganized to include a Director of Intramural Research, assisted by a Clinical Director responsible for patient care, and three Associate Scientific Directors, each responsible for a group of branches or laboratories.

April 28, 1964—The area under supervision of the Associate Director for Viral Oncology was reorganized, and the Laboratory of Viral Carcinogenesis was established.

June 16, 1964—The Immunology Branch was established as a focal point for an expanding program of Institute research on immunology.

December, 1964—The report of the President's Commission on Heart Disease, Cancer, and Stroke was published.

LEGISLATIVE CHRONOLOGY OF NCI

February 4, 1927—Senator M. M. Neely, West Virginia, introduced S. 5589, "To authorize a reward for the discovery of a successful cure for cancer, and to create a commission to inquire into and ascertain the success of such cure." The reward was to be $5 million.

March 7, 1928—Senator M. M. Neely introduced S. 3554, "To authorize the National Academy of

Sciences to investigate the means and methods for affording Federal aid in discovering a cure for cancer and for other purposes."

April 23, 1929—Senator W. J. Harris, Georgia, introduced S. 466, "To authorize the Public Health Service and the National Academy of Sciences jointly to investigate the means and methods for affording Federal aid in discovering a cure for cancer and for other purposes."

May 29, 1929—Senator W. J. Harris introduced S. 4531, authorizing a survey in connection with the control of cancer and providing "That the Surgeon General of the Public Health Service is authorized and directed to make a general survey in connection with the control of cancer and submit a report thereon to the Congress as soon as practicable, together with his recommendations for necessary Federal legislation."

April 2, 1937—Senator Homer T. Bone of Washington introduced S. 2067, "Authorizing the Surgeon General of the Public Health Service to control and prevent the spread of the disease of cancer." It authorized an annual appropriation of $1 million.

April 12, 1937—Congressman Warren G. Magnuson of Washington introduced H.R. 6100, an identical bill to S. 2067.

April 29, 1937—Congressman Maury Maverick of Texas introduced H.R. 6767, "To promote research in the cause, prevention, and methods of diagnosis and treatment of cancer, to provide better facilities for the diagnosis and treatment of cancer, to establish a National Cancer Center in the Public Health Service, and for other purposes." It authorized an appropriation of $2,400,000 for the first year and $1 million annually thereafter. The legal office of the Public Health Service had helped draft the bill on the basis of suggestions made by Dr. Dudley Jackson of San Antonio, Tex.

July 8, 1937—A joint hearing of the Senate and House committees was conducted before a Subcommittee on Cancer Research, and a revised bill was written.

July 23, 1937—The National Cancer Institute Act, Public Law 244, 75th Congress, was passed by Congress.

August 5, 1937—The National Cancer Institute Act, Public Law 244, 75th Congress, was signed by President Franklin D. Roosevelt, "To provide for, foster, and aid in coordinating research relating to cancer; to establish the National Cancer Institute; and for other purposes." An appropriation of $700,000 for each fiscal year was authorized.

March 28, 1938—House Joint Resolution 468, 75th Congress, was passed, "To dedicate the month of April in each year to a voluntary national program for the control of cancer."

July 1, 1944—The Public Health Service Act, Public Law 410, 78th Congress, provided that "The National Cancer Institute shall be a division in the National Institutes of Health." The act also revised and consolidated many revisions into a single law. The limit of $700,000 annual appropriation was removed.

August 15, 1950—Public Law 692, 81st Congress, increased the term of office of National Advisory Cancer Council members from 3 to 4 years and the size of the Council from 6 to 12 members, exclusive of the ex officio members.

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL CANCER INSTITUTE

Carl Voegtlin, Ph. D.

Dr. Carl Voegtlin, the Institute's first Director, was born in Zofingen, Switzerland, on July 28, 1879. He studied at the University of Basel, University of Munich, University of Geneva, and received a Ph. D. degree in 1904 from the University of Frieburg.

Upon arriving in the United States in 1905, he became a chemistry instructor at the University of Wisconsin, and the following year went to Johns Hopkins where he remained until 1913. As professor of pharmacology and Chief of the Division of Pharmacy at the Hygienic Laboratory, his cancer research was largely confined to the biochemical aspects.

During World War II and for several years thereafter he was lecturer in pharmacology at the University of Rochester, which conferred upon him an honorary degree of doctor of science for his contributions to war and other research efforts.

Dr. Voegtlin became Director of the National Cancer Institute on January 13, 1938, and held this post until his retirement from the Public Health Service on July 31, 1943. He retained an active interest in the National Cancer Institute until his death in 1960.

Roscoe Roy Spencer, M.D.

Dr. Roscoe Roy Spencer was born in King William County, Va., July 28, 1888, and received his M.D. degree from Johns Hopkins in 1913. Before becoming the National Cancer Institute's first Assistant Chief, he was noted for his contribution in the investigations of Rocky Mountain spotted fever.

Dr. Spencer became Director of the National Cancer Institute on August 1, 1943, and remained in this post until July 1, 1947. He had assignments with the Public Health Service until his retirement in 1952.

Leonard Andrew Scheele, M.D.

Dr. Leonard Andrew Scheele was born in Fort Wayne, Ind., July 25, 1907. He received an A.B. degree from University of Michigan and M.D. degree from Wayne University.

Upon entering the Public Health Service, he served as assistant quarantine officer, health officer, special cancer fellow at Memorial Hospital in New York City, officer-in-charge of the National Cancer Control Program, and Chief of Medical Division of Civilian Defense before becoming Assistant Chief of the National Cancer Institute in 1946.

Dr. Scheele served as Director of the National Cancer Institute from July 1, 1947 to April 6, 1948, when he was appointed Surgeon General of the Public Health Service. Upon retirement from the Public Health Service in 1956, he became the president of Warner-Chilcott Laboratories, Warner-Lambert Pharmaceutical Co.

John Roderick Heller, M.D.

Dr. John Roderick Heller was born in Fair Play, S.C., on February 27, 1905, and received his M.D. degree from Emory University, Atlanta, Ga. He was commissioned in the Public Health Service in 1934, and became Chief of the Public Health Service's Venereal Disease Division before becoming Director of the National Cancer Institute on May 15, 1948, a post which he held until July 1, 1960.

In February 1964, Dr. Heller resigned as president and chief executive officer of Memorial Sloan-Kettering Cancer Center, to which he had been appointed in 1960. He is now serving as vice chairman of the board of trustees of the center and as special consultant on international, medical, and scientific affairs to the American Cancer Society, New York.

Kenneth Milo Endicott, M.D.

Dr. Kenneth Milo Endicott was born in Canon City, Colo., June 6, 1916, and received his M.D. degree from the University of Colorado in 1939.

He entered the Public Health Service in 1940, and served in the Division of Pathology and as Scientific Director, Division of Research Grants, National Institutes of Health, before being appointed Chief of the Cancer Chemotherapy National Service Center in 1955. In 1958 he was appointed Associate Director, National Institutes of Health, and served in this capacity until appointed Director of the National Cancer Institute on July 1, 1960.

Total NCI Appropriations for Grants and Direct Operations, Fiscal Years 1950–65

Fiscal year	Total grants	Direct operations	Total
1950.....	$14, 400, 000	$4, 500, 000	$18, 900, 000
1951.....	15, 217, 000	4, 869, 000	20, 086, 000
1952.....	14, 640, 000	5, 016, 750	19, 656, 750
1953.....	12, 220, 000	5, 667, 000	17, 887, 000
1954.....	14, 324, 000	5, 913, 000	20, 237, 000
1955.....	15, 096, 000	6, 641, 000	21, 737, 000
1956.....	16, 246, 000	8, 732, 000	24, 978, 000
1957.....	32, 672, 000	15, 760, 000	48, 432, 000
1958.....	31, 134, 000	25, 268, 000	56, 402, 000
1959.....	39, 941, 000	35, 327, 000	75, 268, 000
1960.....	49, 935, 000	41, 322, 000	91, 257, 000
1961.....	68, 183, 000	42, 817, 000	111, 000, 000
1962.....	86, 855, 000	55, 981, 000	142, 836, 000
1963.....	89, 796, 000	65, 946, 000	155, 742, 000
1964.....	82, 187, 000	62, 153, 000	144, 340, 000
1965.....	75, 582, 000	74, 729, 000	[1] 150, 011, 000

[1] Includes special appropriation for virus-leukemia development program.

Source: Financial Management Branch, Office of the Director, NIH.

NCI FIELD STATIONS OR OTHER SPECIAL FACILITIES

Epidemiology Branch of NCI
901 Victory Building
Pittsburgh, Pa.

NCI personnel, since May 1953, have conducted statistical studies of the mortality risk associated with occupational exposure at this field station.

Childhood Leukemia Study, Epidemiology Branch, NCI
Children's Cancer Research Foundation
35 Binney Street
Boston, Mass.

NCI personnel, since October 1955, have conducted statistical studies of environmental and other possible cancer-causing factors related to childhood leukemia.

Environmental Cancer Research Project, Washington County, Md.
Washington County Health Department
1300 Pennsylvania Avenue
Hagerstown, Md.

NCI personnel, since November 1958, have conducted statistical studies of a relatively stable human population of 100,000 persons in order to identify environmental, geographic, and familial factors relating to cancer causation.

Epizoology Section of the Epidemiology Branch, NCI
Michigan State University
East Lansing, Mich.

NCI personnel, since August 1961, have conducted statistical studies of various types of cancer in animals that may produce important information concerning causation of cancer in man.

Epidemiology Branch of NCI
Children's Hospital of Los Angeles
4614 Sunset Boulevard
Los Angeles, Calif.

NCI personnel, since July 1962, have conducted statistical studies of (1) excess in lung cancer mortality among Mexican women in California as compared with California-born women of Mexican descent, (2) relationship of childhood leukemia to complications of pregnancy and disorders associated with cytogenetic defects, and (3) brain tumors and congenital defects of the central nervous system in children.

SPECIAL PROGRAMS OF NCI

Cooperative Research Program for Cancer Therapy

The program was established in April 1955 to expedite the development of effective anticancer drugs. The program embraces every phase of drug research from acquisition and screening of new materials to clinical trials of promising compounds. Most recent development in this program is the expansion of clinical activities to include all aspects of treatment: surgery, radiation, and drugs, and various combinations of these methods.

U.S.-Ghana Joint Research Program

NIH-National Institute of Health and Medical Joint Research Program, Ghana, was established in January 1962 in response to a specific request from President Nkrumah of Ghana to President John F. Kennedy. The Government of Ghana asked that the U.S. Government collaborate with the National Institute of Health and Medical Research of Ghana in developing a program of medical research on health problems of concern to both countries. Under a formal agreement, the Ghanaian Government provides laboratory and clinical space, facilities, and housing; the U.S. Government provides technical and professional staff, equipment, and supplies.

Interagency Agreement for Development of Zonal Centrifuge Systems

The Atomic Energy Commission and the National Cancer Institute signed an agreement in November 1962 for development of zonal centrifuge systems at Oak Ridge National Laboratories in Oak Ridge, Tenn., for the separation and isolation of small biological particles from large volumes of fluid. The biological particles of interest are those in the size range visible in the light microscope, including larger subcellular particles, nuclei, and mitochondria; and those visible in the electron microscope, including ribosomes and virus particles.

Interagency Agreement for Research in Carcinogenesis

In March 1963 the NCI launched an interagency project with the Atomic Energy Commission to study the roles of radiation, viruses, and chemicals as causes of cancer, with emphasis on fundamental investigation of the carcinogenic process. The research is being done at the Oak Ridge National Laboratory and takes advantage of the facilities of the Atomic Energy Commission necessary for this type of investigation.

Virus-Cancer-Leukemia Research Program

A special virus-cancer-leukemia program was initiated in 1965 to expand and intensify research on viruses and leukemia and related diseases. This program is based on the conviction that there now exists sufficient scientific knowledge and technical capability to plan

and carry out an intensified, coordinated, and integrated research effort. A comprehensive plan has been developed covering four areas of research: (1) the cause and prevention of human leukemia, (2) treatment of human leukemia, (3) nature of animal leukemias and their possible relationships to man, and (4) hazards in virus-cancer research and the problem of containment.

NATIONAL HEART INSTITUTE

MISSION OF THE NATIONAL HEART INSTITUTE

The National Heart Institute—

Conducts, fosters, and coordinates research and training on the causes, prevention, diagnosis, and treatment of diseases of the heart and circulation.

Conducts research on the nature of the aging process.

Provides grants-in-aid to public and private institutions and individuals for cardiovascular research and teaching

Provides training and instruction in both the research and clinical aspects of heart diseases.

Provides cardiovascular research fellowships.

Collects and disseminates information on cardiovascular diseases and the aging process.

IMPORTANT EVENTS IN THE HISTORY OF NHI

June 16, 1948—President Harry S. Truman signed the National Heart Act, creating and establishing the National Heart Institute in the Public Health Service and the National Advisory Heart Council as its advisory body.

July 7, 1948—The services of Dr. Paul Dudley White were secured under section 4b of the Heart Act "to be Executive Director of the National Advisory Heart Council and Chief Medical Advisor to the National Heart Institute."

August 1, 1948—Surgeon General Leonard A. Scheele, by General Circular No. 36, Organization Order No. 14; established the National Heart Institute to administer functions of heart research, training, and administration set forth in the National Heart Act. Intramural research projects in cardiovascular diseases and gerontology conducted elsewhere in NIH were transferred to NHI. The Director of NHI was designated as the focal point of leadership and coordination for the total heart program of the Public Health Service.

Dr. Cassius J. Van Slyke was named first Director of the National Heart Institute.

August 29, 1948—Surgeon General Scheele announced the names of the 16 members appointed to the first National Advisory Heart Council, with varying terms of membership to begin on September 1.

September 8, 1948—The first meeting of the National Advisory Heart Council was held.

January 1949—Cooperative Research Units were established at four institutions, jointly financed by the institutions and NHI, pending completion of NHI's own research organization and the availability of further research facilities. Institutions were the University of California, University of Minnesota, Tulane University, and Massachusetts General Hospital.

April 11, 1949—The Director appointed an Associate Director in Charge of Research to head up the Institute's intramural research program.

July 1, 1949—A comprehensive plan for NHI's intramural research program was instituted, organized on 3 general research levels, with 3 laboratory sections, 5 laboratory-clinical sections, and 4 clinical sections.

The Heart Disease Epidemiology Study at Framingham, Mass., was transferred from the Bureau of State Services, PHS, to the National Heart Institute.

January 18–20, 1950—The first National Conference on Cardiovascular Diseases, sponsored by the National Heart Institute and the American Heart Association, was held in Washington, D.C., to summarize current knowledge and to recommend ways of furthering progress against heart and blood vessel diseases.

December 1, 1952—Dr. James Watt was appointed Director of NHI to succeed Dr. Van Slyke, who had

been appointed Associate Director, National Institutes of Health.

July 6, 1953—The first patient was admitted to the NIH Clinical Center for heart disease research.

July 1, 1957—The first members of the National Heart Institute Board of Scientific Counselors begin their terms. The Board was established in 1956 "to provide advice to the NHI on matters of general policy, particularly from a long-range viewpoint, as they relate to the intramural research program."

February 19, 1959—A report to the Nation was presented by the American Heart Association and the National Heart Institute on "A Decade of Progress Against Cardiovascular Disease," at Department of Commerce Auditorium, Washington, D.C.

April 7, 1961—Organizational changes reflecting the Institute's growth became effective; key positions of Director of Intramural Research, Associate Director for Extramural Programs, and Associate Director for Biometrics and Epidemiology were established.

April 21, 1961—The President's Conference on Heart Disease and Cancer, whose participants on March 15 were requested by President Kennedy to assist "in charting the Government's further role in a National attack" on these diseases, convened at the White House and submitted its report.

September 11, 1961—Dr. Ralph E. Knutti was appointed Director of the National Heart Institute to succeed Dr. Watt, who was appointed to head the Public Health Service's international activities.

June 22, 1962—Position title of Associate Director for Biometrics and Epidemiology was changed to Associate Director for Collaborative Studies. The Collaborative Studies organization includes the Framingham Heart Disease Epidemiology Study, Field Epidemiological Research Section, Geographical Disease Studies, International Laboratories, and Biometrics Research Branch.

December 30, 1963—President Johnson approved a joint resolution, unanimously passed by the Congress, to provide for designating the month of February in each year as "American Heart Month."

November 22–24, 1964—The Second National Conference on Cardiovascular Diseases was held at Washington, D.C., under cosponsorship of the American Heart Association and the National Heart Institute and Heart Disease Control Program of the Public Health Service, to appraise developments since the first conference in 1950 and to determine needs and opportunities for continued and accelerated progress against heart and blood vessel diseases.

December 9, 1964—The President's Commission on Heart Disease, Cancer and Stroke, appointed by President Johnson March 7, 1964, to "recommend steps that can be taken to reduce the burden and incidence of these diseases," submitted its report to the President at the White House.

August 1, 1965—Dr. William H. Stewart was appointed Director of the National Heart Institute upon the retirement of Dr. Knutti.

LEGISLATIVE CHRONOLOGY OF NHI

June 16, 1948—The National Heart Act (Public Law 655) authorized the National Heart Institute. The purpose of the act was "To improve the health of the people of the United States through the conduct of researches, investigations, experiments, and demonstrations relating to the cause, prevention, and method of diagnosis and treatment of diseases of the heart and circulation; assist and foster such researches and other activities by public and private agencies, and promote the coordination of all such researches and activities and the useful application of their results; provide training in matters relating to heart diseases, including refresher courses for physicians; and develop, and assist States and other agencies in use of, the most effective methods of prevention, diagnosis, and treatment of heart diseases."

June 25, 1948—The Second Deficiency Appropriation Act of 1948 (Public Law 785) appropriated "For an additional amount, fiscal year 1949 for 'National Institute of Health, operating expenses,' $500,000: *Provided,* That appropriations under said head for the fiscal year 1949 shall be available for carrying out the purposes of the National Heart Act, including erection of temporary structures for storage of equipment and supplies and housing of animals."

June 29, 1949—The Labor-Federal Security Appropriation Act, 1950 (Public Law 141) appropriated

$10,725,000 for expenses necessary to carry out the purposes of the National Heart Act, including grants-in-aid for drawing plans, erection of buildings, and acquisition of land therefor, and, in addition to the amount appropriated, authorized "the Surgeon General, upon recommendations of the National Advisory Heart Council, to approve applications for research and training grants, including grants for drawing plans, erection of buildings, and acquisition of land therefor, not to exceed a total of $5,350,000, for periods beyond the current fiscal year, and such grants shall, if approved during the current fiscal year, constitute a contractual obligation of the Federal Government.",

August 15, 1950—The Omnibus Act of 1950 provided for the termination of all appointments to the Heart and other councils on September 30, and for appointment of a full new membership on October 1, 1950. The Act established uniformity in composition of membership and term of office for all councils.

December 30, 1963—House Joint Resolution 848 (Public Law 88–254) of the 88th Congress was approved. This authorizes and requests the President to issue an annual proclamation designating February as American Heart Month, inviting Governors of States and territories to issue similar proclamations, and urging that the U.S. people give heed to the heart disease problem and support all essential programs required to bring about its solution.

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL HEART INSTITUTE

Cassius James Van Slyke, M.D.

Dr. C. J. Van Slyke, first Director of the National Heart Institute, was born in Benton, Minn., on December 1, 1900. Dr. Van Slyke took his medical degree at the University of Minnesota in 1928 and entered the Reserve Corps of the Public Health Service the same year.

In 1932, he was commissioned in the Regular Corps of the Public Health Service. From 1936 to 1944, Dr. Van Slyke pursued a distinguished career of experimental research at the PHS Venereal Disease Research Laboratory, Staten Island, N.Y., and in 1944 he was made Assistant Chief of the Venereal Disease Division, Washington, D.C.

He was appointed Chief of the Division of Research Grants and Fellowships, National Institute of Health, in 1946, continuing until named Director of the National Heart Institute on August 1, 1948. He left the NHI on November 30, 1952, to serve as Associate Director of the National Institutes of Health until his retirement December 1, 1959. Dr. Van Slyke received a Lasker Award in 1957.

James Watt, M.D.

Dr. James Watt served as Director of the National Heart Institute from December 1, 1952, through September 10, 1961. Born April 28, 1911, at Thomasville, Ga., he received his medical degree from Johns Hopkins School of Medicine in 1935 and his doctorate in public health from the Johns Hopkins School of Hygiene and Public Health in 1936.

A member of the Commissioned Corps of the Public Health Service since 1938, Dr. Watt has spent the major part of his professional life in the conduct and administration of medical research and public health activities. He was director of enteric disease research at the School of Tropical Medicine in Puerto Rico from 1940–42.

For the next 3 years Dr. Watt worked in Louisiana's Charity Hospitals on a study of drugs in treatment of diarrheal diseases. In 1945, Dr. Watt received the Bailey K. Ashford Award of the American Society of Tropical Medicine. During that year, the Chinese Government requested his services in the investigation and control of a serious outbreak of cholera in Chang King.

For several years prior to his appointment as Director of the National Heart Institute in 1952, Dr. Watt was in charge of the field laboratory of the National Microbiological Institute (now NIAID), located at Louisiana State University Medical School. He directed the Heart Institute nearly 9 years, until accepting an appointment to head the Office of International Health, Public Health Service, September 11, 1961. Dr. Watt received the Bronfman Prize for Public Health Achievement in November 1961.

Ralph E. Knutti, M.D.

Dr. Ralph E. Knutti, the third Director of the National Heart Institute was born in Palo Alto, Calif., in 1901. He received his M.D. degree at Yale University in 1928. Following a year as assistant in pathology at Vanderbilt University and his internship in surgery at Lakeside Hospital, Cleveland, he received an ap-

pointment in pathology and bacteriology at the Rockefeller Institute for Medical Research in New York.

From 1932 to 1942 he was instructor, then assistant professor in the pathology department of the University of Rochester. He became associated with the pathology department at the University of Southern California Medical School in 1942 and served as associate professor from 1948 to 1951.

Joining the Public Health Service Commissioned Corps in 1951, he was assigned to the National Institute of Arthritis and Metabolic Diseases as chief of its extramural programs of research grants, training grants, and fellowships, and in 1960 he was appointed Associate Director for Extramural Programs. Dr. Knutti is internationally recognized in academic and medical circles for his achievements in advancing medical education and training in the biomedical sciences. He became Director of the National Heart Institute on September 11, 1961 and retired July 31, 1965.

William H. Stewart, M.D.

Born in Minneapolis, Minnesota, in 1921, Dr. William H. Stewart attended the University of Minnesota from 1939–1941. He received his M.D. degree from Louisiana State University in 1945.

In 1945–46 he interned at Philadelphia General Hospital, after which he served in the U.S. Army Medical Corps until 1948. For a short time thereafter he was on the staff of the Veterans Administration Outpatient Clinic in St. Paul, Minnesota. From 1948–50 he was resident in pediatrics at Charity Hospital, New Orleans, Louisiana. He was in private practice in Alexandria, Louisiana, from 1950 until joining PHS in 1951.

Dr. Stewart, who has the rank of Assistant Surgeon General, has been a Commissioned Officer in PHS since 1951. His assignments have been: Head, Epidemiology Unit, Thomasville (Ga.) Field Station, Communicable Disease Center; Chief, Heart Disease Control Program; Assistant Director of NHI; Assistant to the Surgeon General; Chief, Division of Public Health Methods; and Chief, Division of Community Health Services.

Dr. Stewart is a member of the American Heart Association, the American Medical Association, the American Public Health Association, and the American Academy of Pediatrics.

Prior to his present appointment, Dr. Stewart had been serving as Assistant to the Special Assistant to the Secretary (Health and Medical Affairs) of the Department of Health, Education, and Welfare. He was formerly Assistant Director of NHI.

Total NHI Appropriations for Grants and Direct Operations, Fiscal Years 1950–65

Fiscal year	Total grants	Direct operations	Total
1950.....	$8, 633, 631	$2, 091, 369	$10, 725, 000
1951.....	11, 676, 876	2, 523, 124	14, 200, 000
1952.....	7, 515, 000	2, 567, 650	10, 082, 650
1953.....	8, 706, 000	3, 294, 000	12, 000, 000
1954.....	11, 576, 000	3, 592, 000	15, 168, 000
1955.....	12, 510, 000	4, 158, 000	16, 668, 000
1956.....	13, 690, 000	5, 208, 000	18, 898, 000
1957.....	26, 755, 000	6, 641, 000	33, 396, 000
1958.....	28, 224, 000	7, 712, 000	35, 936, 000
1959.....	36, 056, 000	9, 557, 000	45, 613, 000
1960.....	50, 935, 000	11, 302, 000	62, 237, 000
1961.....	74, 140, 000	12, 760, 000	86, 900, 000
1962.....	114, 182, 000	18, 730, 000	132, 912, 000
1963.....	127, 464, 000	19, 934, 000	147, 398, 000
1964.....	117, 541, 000	14, 863, 000	132, 404, 000
1965.....	108, 303, 000	16, 521, 000	124, 824, 000

Source: Financial Management Branch, Office of the Director, NIH.

NHI FIELD STATIONS OR OTHER SPECIAL FACILITIES

Domestic Units

Gerontology Branch of NHI
Baltimore City Hospitals
Baltimore, Md.

Initiated at NIH in 1940 and subsequently developed in the Baltimore location, this internationally recognized research program on aging was transferred to the NHI when the Institute was established August 1, 1948. Utilizing laboratory and patient space provided at the hospitals, investigations are directed toward describing the biochemical, physiological, and psychological changes that occur with increasing age and studying the basic mechanisms that bring about these changes.

Framingham Heart Disease Epidemiology Study, NHI
Framingham, Mass.

A unit of the NHI's Collaborative Studies organizations, this long-term study was transferred to the NHI on July 1, 1949. Designed to investigate factors involved in the development and progression of heart disease, comprehensive examinations are given at 2-

year intervals to several thousand study participants randomly selected from those of the community population aged 30 to 59 at the time of their first examination. With knowledge gained as some of the participants develop heart disease over the years, the study is providing information on the factors that increase the risk or are involved in heart disease.

Field Epidemiology Research Section, NHI
Framingham, Mass.

This unit of the NHI Collaborative Studies organization, originally located at Memphis, Tenn., is concerned with a variety of epidemiological studies.

Oversea Unit

Pakistan-SEATO Cholera Research Laboratories
Dacca, East Pakistan

NHI investigators have been conducting research and clinical work at this laboratory through the Collaborative Studies organization which provides an administrative mechanism for international research involving population studies and any fundamental problem of cardiovascular disease. At Dacca, NHI scientists are studying acute disturbances (such as occur in cholera) in the normal mechanism by which the bowel transports ions into the bloodstream. They hope to learn more about longer term disturbances that occur in chronic heart failure and kidney disease.

SPECIAL PROGRAMS OF NHI

Cooperative Study on Hormone Therapy of Rheumatic Fever

This study by research centers in the United Kingdom, Canada, and the United States of the relative effectiveness of ACTH, cortisone, and aspirin in treatment of acute rheumatic fever and prevention of rheumatic heart disease was initiated in 1950.

National Blood Program

NHI was given responsibility for medical research and development aspects under this program in 1950. With the advent of the Korean conflict and the threat of atomic bombing, needs for availability of blood for medical use were considered urgent. Grants were made in support of research on blood and its derivatives, aimed at more efficient and more effective utilization.

Inter American Cooperative Study of Atherosclerotic Lesions

Since 1957, NHI has supported by grants this investigation of the geographic pathology of human atherosclerotic lesions through collection, standardized preparation, and analysis of coronary arteries, aortas, and cerebral arteries from natural and accidental deaths in the United States, Central and South America, the Caribbean, South Africa, and the Orient.

Program for Lipid Standards

This program was instituted in 1958 to make available to scientists in the lipid field reference samples and reference mixtures of known composition and high purity. The program is operated, under guidance of a program officer at NHI, with the aid of an expert advisory committee which defines objectives for reference fatty acids, plans procural of reference compounds, and compares results of tests in members' laboratories with the reference mixtures developed from their discussions.

U.S.–U.K. Joint Studies on Cardiopulmonary Diseases

This program, initiated in 1959, was designed to help standardize diagnostic techniques and to compare the form and occurrence in England and the United States of coronary disease, chronic bronchitis, and lung cancer, since major differences have been reported between the two countries.

Cooperative Study of Extracranial Arterial Occlusion

Since 1959, NHI has supported this cooperative investigation of obstruction of extracranial arteries supplying the brain as a cause of symptoms of cerebral insufficiency, with surgery of suitable angiographically confirmed lesions, and evaluation of results of surgical or other treatment.

Cooperative Study in Physiological Role of D-Thyroxin

This grant-supported study was initiated in 1959 to determine the potential clinical usefulness of D-Thyroxin (1) as an agent for inhibiting the output of thyroid-stimulating hormone, and (2) as an agent in lowering blood cholesterol.

International Cooperative Study on the Epidemiology of Heart Disease

This grant-supported study, initiated in 1959, involves examinations and measurements of middle-aged men in defined geographical areas in Italy, Yugoslavia, Finland, Greece, the Netherlands, and the United States, to reveal cardiovascular disease and to characterize the individuals with regard to variables that may be related to etiology or clinical manifestation.

Cooperative Study of Antiarrhythmic and Anticoagulant Drugs

This grant-supported study, initiated in 1960, is concerned with clinical evaluation of relative merits of heparin and warfarin in treatment of heart attacks; and determination of whether prophylactic use of antiarrhythmia medication results in lowered mortality and lowered incidence of cardiac arrhythmias.

Cooperative Study on Renovascular Hypertension

This study, begun in 1960, was designed for rapid accumulation of data on incidence and natural history of renovascular hypertension, evaluation of tests for diagnosing renal artery lesions causing high blood pressure, and appraisal of surgical treatment and methods for predicting its outcome. A score of grantee investigators were participating at the beginning of 1965.

USPHS Cooperative Drug Study

In 1960 there was established among Public Health Service hospitals a basic organizational structure for prompt clinical evaluation of new therapeutic agents by scientifically controlled and designed cooperative studies.

Cooperative Diet and Heart Disease Feasibility Study

Grant-supported investigations have been in progress since 1960 at five locations to assess ability to carry out a large-scale mass study of the effect of modification of diet on prevention of coronary heart disease.

Cooperative Study of Drugs and Coronary Heart Disease

This projected grant-supported study, the planning for which was initiated in 1961, will involve long-term carefully controlled clinical trials of anticholesterolemic and other drugs, to evaluate their ability to reduce the incidence of implications of coronary disease.

Cooperative Study of Lipids in Baboons

Grant-supported investigations into the lipid composition of blood, liver, kidney, heart, aorta, adipose tissue, and bile of baboons fed a high cholesterol fat diet (U.S.) and those on a normal cholesterol fat diet in their native environment (Congo) was initiated in 1961.

Cooperative Study of Fetal Heart Rate Patterns

This grant-supported study, begun in 1962, involves the application of digital computer techniques to the analysis of fetal patterns, correlation with events of pregnancy and birth, and relation to first 5 years of infant's growth and development.

Cooperative Study of Natural History of Congenital Cardiac Defects

This grant-supported retrospective study of records of patients with congenital heart malformations at five participating institutions was initiated in 1962 to develop information concerning the prognosis in cases not treated by surgery.

Cooperative Study on Cardiac Catheterization

This grant-supported study, begun in 1963, involves accumulation, by survey of a number of catheterization centers, of information on the nature of diagnostic procedures used, the patients undergoing the procedures, the incidence of complications, and a summary of joint experience in those uncommon forms of heart disease with which a single laboratory would not have had extensive experience.

Artificial Heart Program

This program was begun in 1964 to expedite progress in a research area of apparent promise—the possibility of effective artificial devices to assist or replace the failing human heart. The program was planned to stimulate, initiate, and coordinate nationwide research in development of artificial organs.

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

MISSION OF THE NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

The National Institute of Allergy and Infectious Diseases—

Conducts, fosters, and coordinates research on the cause, prevention, diagnosis, and treatment of infectious, parasitic, and allergic diseases.

Conducts basic research on the physiology, biochemistry, biophysics, chemotherapy, and immunology of micro-organisms, and their relationship to human infection and disease.

Provides research grants to investigators in private institutions, and fellowships and training grants to promising young scientists.

Adapts and applies laboratory findings in the microbiological field to specific disease control measures, including the development and testing of prototype virus and other microbial vaccines.

Develops, produces, and distributes standardized virus reference reagents and allergens to the national scientific community.

Maintains liaison with the Bureau of State Services in planning and developing programs of mutual interest.

IMPORTANT EVENTS IN THE HISTORY OF NIAID

1902—Earliest studies on Rocky Mountain spotted fever took place in Montana.

1948—The National Microbiological Institute was established November 1 and incorporated the Rocky Mountain Laboratory and the Biologics Control Laboratory along with other basic research units of the Public Health Service. Dr. Victor H. Haas became the first Director.

1951—The Extramural Programs Branch of NMI was established for the purpose of administering research grants, training grants, and research fellowships.

1955—The National Microbiological Institute became the National Institute of Allergy and Infectious Diseases on December 29. Dr. Victor H. Haas remained as Director. Biologics control function transferred to newly established DBS.

1957—Dr. Justin M. Andrews became the Director of NIAID in April.

1960—On December 20, 1960, a Committee on International Centers was established. The Committee recommended establishment of oversea centers for research and training, and this program went into operation in 1961. Five centers have since been established, each as a cooperative enterprise between a foreign institution and a medical school in the United States. This program was transferred to Office of International Research on July 1, 1962.

1962—Collaborative Research was established within the Institute, and included the Vaccine Development Branch and the Research Reference Reagents Branch.

1963—A $750,000 renovation program was completed at the Rocky Mountain Laboratory, including animal building, insectary, new shops building, and renovations to the library.

1964—On October 1, 1964, Dr. Dorland J. Davis became the Director of NIAID upon the retirement of Dr. Justin M. Andrews.

LEGISLATIVE CHRONOLOGY OF NIAID

November 1, 1948—The National Microbiological Institute was created by administrative order in accordance with General Circular No. 55, Organization Order No. 20, dated October 8, 1948.

December 29, 1955—The National Microbiological Institute was renamed National Institute of Allergy and Infectious Diseases by PHS Briefing Memorandum of November 4, 1955, from Surgeon General to the Secretary of Health, Education, and Welfare.

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

Victor H. Haas, M.D.

Dr. Victor H. Haas was born in Cincinnati, Ohio, on January 6, 1909. From the University of Cincinnati he received his B.S. degree in 1929, his B.M. degree in 1931, and his M.D. degree in 1932.

After joining the Public Health Service as an Assistant Surgeon in 1932, he conducted investigations of encephalitis in St. Louis in 1933. He spent the next year at the National Institute of Health in Bethesda, and from 1935–39 was at the Plague Laboratory in San Francisco.

During World War II, Dr. Haas was Chief of the Medical Commission to the Yunnan-Burma Railway in China, and Staff Officer in the China-Burma-India Theater. He served as officer in charge of Public Health Service malaria investigations from 1943 to 1948, and was advanced to the grade of Medical Director in the Public Health Service in 1948.

Dr. Haas was appointed Director of the National Microbiological Institute (later renamed the "National Institute of Allergy and Infectious Diseases") on November 1, 1948, and continued in this post until April 1957.

Justin M. Andrews, Sc. D., LL.D.

Dr. Justin M. Andrews was born in Providence, R.I., on August 28, 1902. He received a Ph. S. degree from Brown University in 1923, and a Sc. D. degree from Johns Hopkins University in 1926 where he later received an LL.D. degree in 1951.

From 1926–28, he was instructor, assistant professor, and associate professor of protozoology at the Johns Hopkins School of Hygiene and Public Health, and became a special member of the Rockefeller Foundation in 1929.

After serving as visiting professor of parasitology at the University of the Philippines in Manila from 1930–31, he became director of the Division of Malaria and Hookworm Service in the Georgia Department of Public Health in Atlanta.

In 1941 he became a Senior Zoologist in the Public Health Service, and held various posts in Atlanta until 1953 when he became Assistant Surgeon General in the Bureau of State Services. Dr. Andrews was appointed Director of the National Institute of Allergy and Infectious Diseases in April 1957, and continued in this post until his retirement from the U.S. Public Health Service on October 1, 1964.

Dorland J. Davis, M.D.

Dr. Dorland J. Davis was born in Chicago, Ill., on July 2, 1911. He received his B.S. degree from the University of Illinois in 1933, his M.D. degree from the Johns Hopkins University in 1937, and a Dr. P.H. degree from Johns Hopkins in 1940.

Dr. Davis became a Commissioned Officer in the Public Health Service in 1939 and was first assigned to the Division of Infectious Diseases, National Institute of Health. In 1943 he served in North Africa as a member of a medical team investigating endemic diseases, particularly malaria and typhus fever.

He returned to the Division of Infectious Diseases and, in 1954, was appointed Chief of the Laboratory of Infectious Diseases, National Microbiological Institute (now the National Institute of Allergy and Infectious Diseases). In 1956 he was named Associate Director in Charge of Research, in 1962 Director of Intramural Research, and on October 1, 1964, Director of the National Institute of Allergy and Infectious Diseases.

Total NIAID Appropriations for Grants and Direct Operations, Fiscal Years 1954–65

Fiscal year	Total grants	Direct operations	Total
1954.....	$2, 067, 000	$3, 671, 000	$5, 738, 000
1955.....	2, 227, 000	3, 953, 000	6, 180, 000
1956.....	2, 227, 000	5, 548, 000	7, 775, 000
1957.....	8, 182, 000	5, 117, 000	13, 299, 000
1958.....	11, 591, 000	5, 809, 000	17, 400, 000
1959.....	17, 091, 000	6, 980, 000	24, 071, 000
1960.....	26, 280, 000	7, 774, 000	34, 054, 000
1961.....	35, 141, 000	8, 859, 000	44, 000, 000
1962.....	43, 900, 000	12, 191, 000	56, 091, 000
1963.....	49, 256, 000	16, 886, 000	66, 142, 000
1964.....	51, 175, 000	17, 548, 000	68, 723, 000
1965.....	51, 288, 000	18, 559, 000	69, 847, 000

Source: Financial Management Branch, Office of the Director, NIH.

NIAID FIELD STATIONS OR OTHER SPECIAL FACILITIES

Domestic Units

Rocky Mountain Laboratory, NIAID
Hamilton, Mont.

At this laboratory, established in 1921, research is aimed at increasing basic knowledge of insect-and-animal-borne diseases of man and the diagnosis, treatment, and control of these diseases. Field studies of diseases having reservoirs in nature are stressed. Research on infectious and allergic diseases, especially those of interest to the western community, is conducted. The mechanisms of immunity relating to hypersensitivity and to the specific prophylaxis of fungal, rickettsial, mycobacterial, and salmonella infections are studied.

Cytology Section of the Laboratory of Parasite Chemotherapy, NIAID
Chamblee, Ga.

Established in 1959. Absorbed the Section on Epidemiology, LPC, when it was inactivated at Columbia, S.C., in 1963. Absorbed personnel of the Far East Research Project, LPC, when it was inactivated at Kuala Lumpur, Malaya, in 1964.

Pacific Research Section of the Laboratory of Infectious Diseases, NIAID
Honolulu, Hawaii

Established in 1962, this section provides a laboratory and field base for comprehensive investigations of eosinophilic meningitis, related diseases, and other infectious diseases of specific importance to Hawaii and other Pacific islands.

Malaria Studies Project of the Laboratory of Parasite Chemotherapy, NIAID
U.S. Penitentiary
Atlanta, Ga.

Established in March 1944.

Oversea Units

Far East Research Project of the Laboratory of Parasite Chemotherapy, NIAID
Kuala Lumpur, Malaya

Established in August 1960, this laboratory is the site of investigations of human and monkey malaria. Inactivated on October 31, 1964, and personnel transferred to the Cytology Section of the Laboratory of Parasite Chemotherapy, Chamblee, Ga.

Middle America Research Unit of the Laboratory of Tropical Virology, NIAID
Panama Canal Zone, Panama

Established in 1957 and made a permanent field station in 1961, this laboratory is the site of research conducted in cooperation with elements of the U.S. Armed Forces to study the etiology, epidemiology, and ecology of viral and mycotic diseases occurring in the American tropics. Early emphasis was on arthropod-borne viruses and histoplasmosis, and present studies focus on Bolivian hemorrhagic fever, the encephalitides, and the epidemiology of histoplasmosis in bats in Panama.

MAJOR PROGRAMS OF NIAID

Vaccine Development Program

The Vaccine Development Program Branch, established in 1962, stimulates, coordinates, and implements a collaborative program for the development of vaccines for prevention of infectious diseases, particularly respiratory infections. With the help of appropriate advisory groups, the Branch promotes research leading to vaccine development, testing, clinical and field trials, methodology and evaluation; and encourages grant applications for research and training in areas of prime interests.

Research Reference Reagents Program

The Research Reference Reagents Branch was established in 1962 to stimulate, coordinate, and implement a collaborative program for support of microbiological materials and criteria for identification of microbial agents. With the help of appropriate advisory groups, the Branch promotes research and development leading to production, standardization, certification, and distribution of reference and research reagents. The Branch also maintains liaison with, and coordinates activities of NIAID and other Institutes, and of governmental and private agencies, groups, and researchers to facilitate research on microbial identification and standardization. Other functions include disseminating information and tech-

nical advice on research and developments regarding reference and research reagents and maintaining liaison with the Communicable Disease Center in Atlanta, Ga.

Bolivian Hemorrhagic Fever Program

In 1962, at the request of the Bolivian Government, the Middle America Research Unit, NIAID, initiated a study of hemorrhagic fever, a serious viral illness that is known to have occurred in Bolivia since 1959 and that has caused over 200 deaths in the epidemic area. The current study, directed by MARU, is a cooperative project of the Bolivian Ministry of Health, the Pan American Sanitary Bureau, the Public Health Service, and various branches of the U.S. military units stationed in the Canal Zone and La Paz, Bolivia. Investigators have established that BHF is caused by *Machupo* virus and that a peridomestic rodent (*Calomys callosus*), similar to a field mouse, harbors the infection. Studies have revealed that *Machupo* virus is similar to but distinct from *Junin* virus which is the etiologic agent of Argentine hemorrhagic fever. Control of the rodent population stopped new human infection in the town of San Joaquin, Bolivia, but studies continue in the epidemiology of this disease and the ecology of the causative virus. Related studies at LTV in Bethesda are directed at development of a vaccine.

Tissue Transplantation Program

With the earmarking by the Congress of special funds for tissue transplantation studies in fiscal year 1965, NIAID has embarked on a three-pronged program to accelerate research in this field.

(1) The cooperation of universities and university hospitals has been enlisted through a Subcommittee on Transplantation Immunology of the National Advisory Allergy and Infectious Diseases Council. This Subcommittee has helped to define areas where present basic research efforts might best be concentrated, and a portion of the specially appropriated funds has been used to augment grant-supported research in these areas.

(2) In the collaborative program, a panel of 10 non-Federal and Federal investigators has formulated specific target objectives to be pursued through contracts with selected laboratories. Contracts are presently being developed on problems of tissue typing, where initial efforts will be concentrated.

(3) In the Laboratory of Immunology, NIAID, a vigorous expansion of research on transplantation immunology is being carried out, with the establishment of an Immunobiology Section for studies of immunobiology basic to cell and tissue transplantation.

U.S.–U.S.S.R. Scientific Exchange Missions

Institute participation in this program was begun in 1961 when NIAID sponsored an Infectious Diseases and Microbiological Exchange Mission to the U.S.S.R. At that time three NIAID virologists and three outstanding microbiologists from the scientific community spent a month visiting major infectious disease research centers in the Soviet Union. During 1964, NIAID continued its participation by serving as host to and arranging a conducted tour for two well-known Russian virologists, and by taking part in an NINDB scientific mission to the U.S.R.R. on latent viruses. Other exchanges are in the planning stage; e.g., a Russian allergy mission to this country and a projected mission on hemorrhagic fever to the U.S.S.R. in 1965.

Public Law 480 Projects

A project in Egypt on schistosomiasis, another in India on amebiasis, and a third in Israel on toxoplasmosis have been established by the Laboratory of Parasitic Diseases, NIAID, under Public Law 480, which provides among other things for financing research projects with national currency. The schistosomiasis and toxoplasmosis projects were established in the summer of 1962 and are scheduled to run for 4 and 5 years, respectively. The amebiasis project which is under way in Hyderabad, India, was initiated in 1964 for a period of 3 years. Two other Public Law 480 projects, one in Egypt on typhus and another in Israel on mechanisms of resistance to antibiotics, are in their initial stages.

NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES

MISSION OF THE NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES

The National Institute of Arthritis and Metabolic Diseases—

Conducts, fosters, and coordinates research into the causes, prevention, diagnosis, and treatment of the various arthritides, the rheumatic and collagen diseases, and the broad spectrum of metabolic diseases, such as diabetes, other inborn errors of metabolism, gastroenterology, orthopedics, dermatology, hematology, nutrition, endocrine disorders, urology and renal disease, energy and mineral metabolism, and subjects related to the above.

Conducts basic research in biochemistry; nutrition; pathology; histochemistry; chemistry; physical, chemical and molecular biology; pharmacology; and toxicology.

Administers extramural programs of relevant research grants, training grants, traineeships, and fellowships.

Supports applied research and development in relevant fields through the contract mechanism.

Conducts collaborative programs and studies in biometry and epidemiology.

Collects, prepares, and disseminates information on research progress and on diseases and programs within its general area of interest, to interested scientists and, separately, to the public through regularly scheduled publications and through the utilization of public communications media, exhibits, and films to disseminate information as it becomes available.

Encourages, sponsors, and organizes meetings, conferences, and symposia on subjects within its area of responsibility in order to facilitate rapid and complete communication of scientific information.

SOME IMPORTANT EVENTS IN THE HISTORY OF NIAMD

November 1, 1948—The immediate forerunner of the National Institute of Arthritis and Metabolic Diseases, the Experimental Biology and Medicine Institute was established December 7, 1947. Dr. W. H. Sebrell, Jr., was appointed Director.

August 15, 1950—In response to the urgent need for an Institute to spearhead the research effort against arthritis and rheumatism, President Harry S. Truman signed into law the Omnibus Medical Research Act authorizing the establishment of the National Institute of Arthritis and Metabolic Diseases in the Public Health Service, and the appointment of a National Advisory Arthritis and Metabolic Diseases Council.

November 15, 1950—The National Advisory Arthritis and Metabolic Diseases Council held its first meeting.

November 22, 1950—The National Institute of Arthritis and Metabolic Diseases was established in accordance with the Omnibus Medical Research Act by Surgeon General Scheele, with Dr. W. H. Sebrell, Jr., as Director.

July 2, 1953—The opening of the Clinical Center broadened the scope of NIAMD intramural activities to include observation and treatment of patients.

October 1, 1953—Dr. Floyd M. Daft was appointed Director, NIAMD, to succeed Dr. Wilder.

November 19, 1953—The First National Conference on Research and Education in the Rheumatic Diseases was held at the National Institutes of Health under the joint sponsorship of NIAMD, the American Rheumatism Association, and the Arthritis and Rheumatism Foundation.

April 1955—The Extramural Training Program was established. Training grants in its first year of operation totaled $250,000.

December 1, 1956—The Second National Conference on Research and Education in the Rheumatic Diseases, sponsored by the NIAMD, the Arthritis and Rheumatism Foundation, and the American Rheumatism Association, was held at NIH.

1958—The Cooperative Multiclinic Arthritis Project was organized by the NIAMD and the Arthritis and Rheumatism Foundation in order to create a multiclinic team—11 centers in 9 States—to conduct significant and thoroughgoing evaluations and com-

parisons of the therapeutic efficacy of known and newly discovered drugs in the treatment of rheumatoid arthritis.

1961—The University Group Diabetes Study was initiated in 1961 at seven research institutions. Supported in part by the NIAMD and in part by the institutions, it was the first large-scale study of the entire natural history of diabetes.

November 23, 1962—Dr. G. Donald Whedon, Assistant Director, NIAMD, and Chief of the Metabolic Diseases Branch, was appointed Director, NIAMD, to succeed Dr. Daft.

November 6, 1964—NIAMD and the National Heart Institute held the First National Conference on Hemodialysis at the National Institutes of Health.

November 1964—The first issue of a journal designed to improve communication of research developments in the field of arthritis and rheumatic diseases was inaugurated by NIAMD. The new monthly publication, *Arthritis and Rheumatic Diseases Abstracts,* contains abstracts of current world literature on arthritis and rheumatic disease. As the only central source of up-to-date information in this research area, the journal closed an existing communication gap by providing investigators with access to articles from over 4,000 biomedical journals published throughout the world.

LEGISLATIVE CHRONOLOGY OF NIAMD

November 1, 1948—Under section 212 of Public Law 80–410 the experimental Biology and Medicine Institute was established as the immediate forerunner of the National Institute of Arthritis and Metabolic Diseases, with Dr. W. H. Sebrell, Jr., as Director.

August 15, 1950—Public Law 81–629, the Omnibus Medical Research Act, authorized establishment of the National Institute of Arthritis and Metabolic Diseases to ". . . conduct researches relating to the cause, prevention, and methods of diagnosis and treatment of arthritis and rheumatism and other metabolic diseases, to assist and foster such researches and other activities by public and private agencies, and promote the coordination of all such researches, and to provide training in matters relating to such diseases. . . ." Section 431 of this Act also authorized the Surgeon General to establish a national advisory council to advise him with respect to activities of the Institute.

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL INSTITUTE OF ARTHRITIS AND METABOLIC DISEASES

William Henry Sebrell, Jr., M.D.

Born in Portsmouth, Va., in 1901, Dr. W. H. Sebrell received his M.D. degree from the University of Virginia. He began his research career under Dr. Joseph Goldberger, famous for his identification of pellagra as a nutritional deficiency disease.

During World War II, Dr. Sebrell served as Codirector of the National Nutrition Program. Among his accomplishments in the field of nutrition are recognition of the deficincy disease ariboflavinosis, and the discovery that cirrhosis of the liver in rats can be treated with dietary supplements. He also studied relationship between pantothenic acid deficiency and the adrenal glands, and developed methods for producing and treating anemias in experimental animals.

Dr. Sebrell served as Director of the Experimental Biology and Medicine Institute from its inception December 11, 1947, until it was reorganized August 15, 1950, as the National Institute of Arthritis and Metabolic Diseases. On October 1, 1950, he was named Director of the National Institutes of Health, a post which he held until his retirement on August 1, 1955.

Russell M. Wilder, M.D.

Dr. Wilder was born in Cincinnati in 1885 and graduated in 1907 from the University of Chicago, where he received his Ph. D degree in 1912. He was awarded his M.D. degree from Rush Medical College, Chicago, also in 1912.

Dr. Wilder became a member of the Mayo Clinic Staff in 1919. From 1929 to 1931 he was professor and chairman of the Department of Medicine at the University of Chicago, after which he returned to the Mayo Clinic where he became head of the Department of Medicine.

On March 6, 1951, he became Director of the National Institute of Arthritis and Metabolic Diseases, but resigned because of ill health on June 30, 1953.

Internationally known for nutrition studies, Dr. Wilder contributed greatly to knowledge of diabetes. He identified the disease entity hypoglycemia, and pioneered new methods in the treatment of epilepsy. Among his most widely read publications are *A Primer for Diabetic Patients* and a medical textbook on diabetes and related diseases.

Floyd S. Daft, Ph. D.

Born May 19, 1900, in Griswold, Iowa, Dr. Floyd S. Daft received his Ph. D. in 1926 from Yale University and has been honored with the honorary degree of doctor of science from Simpson College in Indianola, Iowa, where he received his undergraduate degree in 1921.

After teaching and engaging in research at Yale, Harvard, and the University of Rochester School of Medicine, Dr. Daft joined the National Institute of Health in 1937. He served as Director of Laboratory Research of NIH's early Experimental Biology and Medicine Institute, and held the office of Director of the National Institute of Arthritis and Metabolic Diseases from October 1, 1953, until his retirement May 30, 1962.

Dr. Daft has contributed importantly to the understanding of dietary deficiencies causing anemia and cirrhosis of the liver. He pioneered in the study of folic acid, pantothenic acid, and B-complex vitamins, and developed many of the techniques necessary for germ-free research.

G. Donald Whedon, M.D.

Born July 4, 1915, in New York, Dr. Whedon received his A.B. from Hobart College in 1936 and his M.D. from the University of Rochester School of Medicine in 1941. He interned at the Mary Imogene Bassett Hospital, Cooperstown, N.Y., and was subsequently associated with the Strong Memorial Hospital in Rochester. Between 1944–52, he was on the staffs of the Cornell University Medical College and the New York Hospital.

After joining the NIAMD staff in 1952 as Chief of the Metabolic Diseases Branch, a post he still retains, Dr. Whedon was named Assistant Director of the Institute in 1956. On November 23, 1962, Surgeon General Luther L. Terry appointed Dr. Whedon to succeed Dr. Daft as Director, NIAMD.

Dr. Whedon was among those who assisted in the initial planning of program and research facilities for NIAMD's clinical investigations. His medical research experience and interests include the metabolic and physiological aspects of convalescence and immobilization, metabolism and respiratory physiology in paralytic poliomyelitis, disorders of mineral metabolism, and human energy metabolism.

Dr. Whedon is the author of numerous publications and a member of several medical and scientific societies, including the Endoctrine Society, the American Physiological Society, the American Institute of Nutrition, and the Scientific Council of the Maryland Academy of Sciences. From 1959 to 1964 he served on the Subcommittee on Calcium of the Committee on Dietary Allowances, Food and Nutrition Board, National Research Council. He is currently a member of the editorial board of the *Journal of Clinical Endocrinology & Metabolism* and is a consultant to Space Medicine Division, Office of Manned Space Flight, NASA.

Total NIAMD Appropriations for Grants and Direct Operations, Fiscal Years 1954–65

Fiscal year	Total grants	Direct operations	Total
1954.....	$3, 621, 000	$3, 379, 000	$7, 000, 000
1955.....	4, 390, 000	3, 880, 000	8, 270, 000
1956.....	5, 910, 000	4, 930, 000	10, 840, 000
1957.....	10, 290, 000	5, 595, 000	15, 885, 000
1958.....	13, 837, 000	6, 548, 000	20, 385, 000
1959.....	23, 421, 000	7, 794, 000	31, 215, 000
1960.....	38, 553, 000	8, 309, 000	46, 862, 000
1961.....	50, 882, 000	10, 318, 000	61, 200, 000
1962.....	69, 809, 000	12, 022, 000	81, 831, 000
1963.....	90, 011, 000	13, 377, 000	103, 388, 000
1964.....	99, 914, 000	13, 765, 000	113, 679, 000
1965.....	97, 905, 000	15, 145, 000	113, 050, 000

Source: Financial Management Branch, Office of the Director, NIH.

NIAMD FIELD STATIONS OR OTHER SPECIAL FACILITIES

Mobile Laboratory-Equipped Trailer Unit of the Arthritis and Rheumatism Branch, NIAMD

In 1960, a laboratory-equipped trailer unit operated by NIAMD began performing followup studies on relatives of former participants in arthritis research studies at NIH. Physical examinations, X-rays, blood tests, and other procedures were performed in the 22-

foot trailer-truck, equipped with a special 3,000-watt generator to provide electrical power for the portable X-ray machine. Two similarly equipped mobile vans have been employed in an epidemiological population study of osteoarthritis and rheumatoid arthritis among the Blackfeet and Pima Indians, in Montana and Arizona, respectively. This study, which began in 1961, completed its first stage in 1963. In 1965, the NIAMD investigators extended their survey to include a study of the prevalence of diabetes among the Pima.

SPECIAL PROGRAMS OF NIAMD

Cooperative Multiclinic Arthritis Project

In 1958 the NIAMD and the Arthritis and Rheumatism Foundation (ARF) established this project in order to create a multiclinic team—11 centers in 9 States—to conduct significant and thoroughgoing evaluations and comparisons of the therapeutic efficacy of known and newly discovered drugs in the treatment of rheumatoid arthritis. One of the project's most important contributions has been the demonstration of the usefulness of the antimalarial drug, hydroxychloroquine, during the acute phase of rheumatoid arthritis, and the confirmation of reports that ocular damage may be produced during long-term administration of large doses of the drug.

University Group Diabetes Study

Initiated in 1961 at seven research institutions, this first large-scale study of the natural history of diabetes is investigating the development, incidence, and severity of late diabetic complications such as retinopathy, atherosclerosis, kidney disease, and nervous system disorders, in large groups of patients treated by various modes of therapy. The study is supported by the individual investigators' own institutions as well as by NIAMD.

Epidemiology and Biometry Program

The Epidemiology and Biometry Branch, which was established in 1961, applies new methods of epidemiology, biometry, and biochemical and population genetics to the investigation of metabolic processes and disorders. The investigations of the Branch require observations in the field, clinical study, and laboratory investigations in the United States and abroad, in order to understand the causes and the nature of diseases of interest to the Institute, and to provide a center for advanced research training in epidemiology and biometry. The studies involve very close collaboration with other scientists and scientific institutions in the field.

Pituitary Gland Project

As a result of the discovery of methods for isolating growth hormone from human pituitary glands, the experimental effectiveness of this hormone in man (in contrast to the ineffectiveness of growth hormone from other species), and the lack of an organized, coordinated effort to prepare pure human growth hormone in sufficient quantity for research, a contract was granted in 1963 to the Johns Hopkins University for the founding of the National Pituitary Agency. The Agency's mission is to provide materials, facilities, and services for the establishment and maintenance of a pituitary gland storage bank and to facilitate the preparation of growth hormone in amounts adequate for basic and clinical research.

NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

MISSION OF THE NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

The National Institute of Child Health and Human Development—

Supports, fosters, and coordinates research and training in areas relating to maternal health, child health, and human development, focusing not on any one disease or part of the body but on the continuing process of growth and development from reproduction and prenatal development, through infancy and childhood, and on into maturation and aging.

Provides research project grants to public and private institutions and individuals in the field of child health and human development.

Provides training grants and awards.

Collects and disseminates research information related to its area of interest.

IMPORTANT EVENTS IN THE HISTORY OF NICHD

January 12, 1961—The Report of the Task Force on Health and Social Security to President-elect John F. Kennedy called for the establishment, by administrative action of the Surgeon General, of a National Institute of Child Health within NIH.

January 30, 1961—An opinion of the Department of Health, Education, and Welfare General Counsel stated that existing legislation (enacted in 1950) limited administrative creation of new institutes to those focused on a particular disease or groups of diseases, and that new legislation would be necessary to establish the institute called for in the Task Force report.

February 17, 1961—A Center for Research in Child Health was established by the Surgeon General in the Division of General Medical Sciences.

October 17, 1962—President Kennedy signed Public Law 87–838 authorizing establishment of the National Institute of Child Health and Human Development.

November 1, 1962—Dr. Robert A. Aldrich was named Consultant to the Center for Research in Child Health and Director-designate of the proposed new Institute.

January 30, 1963—Secretary of Health, Education, and Welfare Anthony J. Celebrezze approved establishment of the National Institute of Child Health and Human Development with provisions that the Center for Research in Child Health and the Center for Research in Aging (established in 1956) be transferred from the Division of General Medical Sciences as intergral parts of the new Institute.

May 14, 1963—Members of the National Advisory Child Health and Human Development Council were appointed by the Surgeon General.

November 14, 1963—The first meeting of the National Advisory Child Health and Human Development Council was held November 14–16.

July 1, 1964—The Study Group on Accidents and Aging at St. Petersburg, Fla., was transferred from the Division of Accident Prevention to the NICHD to become the Institute's first direct research facility, the Human Development Study Center, under the direction of Dr. Alfred H. Lawton.

January 11, 1965—An agreement was signed between the National Institute of Child Health and Human Development and the Medical Department of the Navy to set up the Mental Retardation Diagnosis and Study Unit on the grounds of the National Naval Medical Center, Bethesda, Md.

LEGISLATIVE CHRONOLOGY OF NICHD

October 17, 1962—President John F. Kennedy signed Public Law 87–838 authorizing the Surgeon General, with approval of the Secretary, "to establish in the Public Health Service an institute for the conduct and support of research and training relating to maternal health, child health, and human development. . . ."

October 31, 1963—President Kennedy signed Public Law 88–164 to provide assistance in combating mental retardation through grants to assist in meeting the construction costs of research centers on mental retardation and related aspects of human development; to aid in the construction of facilities for the retarded and for other purposes. (The Mental Retardation Program of the National Institute of Child Health and Human Development is responsible for program consultation relating to the mental retardation centers, and will utilize present research and training grant authorities to support projects in these centers when they become operational.)

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

Robert A. Aldrich, M.D.

Dr. Robert A. Aldrich became the first Director of the National Institute of Child Health and Human Development on March 1, 1963, and served until October of the following year, when he returned to his academic post at the University of Washington. Born December 13, 1917, in Evanston, Ill., he re-

ceived his undergraduate education at Amherst College, earning the B.A. degree (cum laude) in 1939. He received his M.D. from Northwestern University in 1944.

From 1944 to 1946 he served in the Navy Medical Corps. Prior to becoming NICHD Director, he was professor and chairman, Department of Pediatrics, University of Washington School of Medicine, from 1956 to 1963. Dr. Aldrich is certified by the National Board of Medical Examiners, American Board of Pediatrics, and the Oregon Basic Science Examining Board. He is a Diplomate of the American Board of Pediatrics, and a member of the American Medical Association, Endocrine Society, American Pediatrics Society, Society for Pediatric Research, and American Association for the Advancement of Science.

Donald Harting, M.D.

Born in 1922 in Wilmington, Del., Dr. Donald Harting received his B.S. from Harvard College in 1943, his M.D. from Harvard Medical School in 1946, and his M.P.H. from the Johns Hopkins School of Public Health in 1950.

Dr. Harting was commissioned in the Public Health Service in November 1947, and served until 1949 as Medical Officer in Charge, Diabetes Demonstration Unit, Brookline, Mass. After residency training in pediatrics at the University of Colorado School of Medicine, he became Regional Medical Director, Children's Bureau, Federal Security Agency Regional Office V, and remained in that position from 1951 to 1954. In 1954 he became Chief of the Program Development Branch and of State and Local Services, Division of General Health Services, and from 1960 to 1962 was Deputy Chief of the Public Health Administration Branch, Bureau of State Services.

Dr. Harting came to the National Institutes of Health as Director of the Center for Research in Child Health, Division of General Medical Sciences. He served as Assistant Director of the National Institute of Child Health and Human Development from its establishment in January 1963 until October of the following year, when he became Acting Director of the Institute. On July 8, 1965, Dr. Harting was appointed as the second Director of NICHD.

Dr. Harting is a member of the PHS Commissioned Officers' Association, the American Public Health Association, the National Committee for Children and Youth, the American Medical Association, and the American Association on Mental Deficiency.

Total NICHD Appropriations for Grants and Direct Operations, Fiscal Years 1964–65

Fiscal year	Total grants	Direct operations	Total
1964.....	$32, 800, 000	$1, 200, 000	$34, 000, 000
1965.....	38, 906, 000	3, 790, 000	42, 696, 000

Source: Financial Management Branch, Office of the Director, NIH.

NICHD FIELD STATIONS OR OTHER SPECIAL FACILITIES

Human Development Study Center, NICHD St. Petersburg, Fla.

The Center, established on July 1, 1964, was the first direct research facility of the NICHD and evolved from a prior Public Health Service research activity in St. Petersburg, the Study Group on Accidents and Aging. The initial research activities of the Center have been to determine changes in physiological and psychological capacities of older persons. Future studies will be broadened to include investigations of other aspects of the life cycle.

NICHD Outpatient Diagnostic and Study Unit U.S. Naval Hospital, Bethesda, Md.

An agreement between the NICHD and the Medical Department of the Navy was signed on January 11, 1965, for the establishment of a clinical research center for the study and diagnosis of mental retardation. The Unit, though funded and staffed as a direct research activity of the NICHD, will be run on a cooperative basis with the U.S. Naval Hospital, National Naval Medical Center, which will supply supportive services. Activity will be concentrated on the biomedical and behavioral aspects of mental retardation, including diagnostic studies, parent counseling and guidance, and selected educational and therapeutic procedures for the retarded and for their families.

MAJOR PROGRAMS OF NICHD

Reproductive Biology

This program, one of eight major program areas within NICHD, seeks through research to improve

knowledge and understanding of the basic processes whereby life if propagated. Emphasis is placed on the study of parental factors and the early sequence of events leading from conception through embryonic development.

Perinatal Biology

This program is concerned with events occurring during the intrauterine phase of life, particularly those events relating to infant survival and later development. Major emphasis is being placed on understanding the biology and behavior of the pregnant mother.

Growth and Development

This program is primarily concerned with the determinants of the individual's physical, intellectual, social, and behavioral development in the period from birth to full maturity. Major emphasis is placed on health problems unique to infancy, childhood, and adolescence.

Aging

This program strives to understand the biological, behavioral, and social processes that account for the gradual lessening of vigor and fitness experienced by mature individuals, in varying degrees, with advancing years. Investigations of special interest to this program include studies of the progressive changes that take place in a cell, tissue, organ system, or in a total individual or group with the passage of time.

Mental Retardation

This program involves a concerted research attack on a wide variety of known and unknown causes of retardation while, at the same time, seeking more effective measures to prevent, diagnose, and ameliorate this condition.

Congenital Malformations

Under this program, NICHD supports research into the prenatal causes of structural defects present at birth. This program places special emphasis on studies of multiple organ system defects, their cause, prevention, and amelioration.

Developmental Pharmacology

Under this program the Institute supports studies dealing with the varying effects of drugs and other therapeutic agents at different stages of life. Special attention is being given to studies of the effects these agents have at various stages of prenatal mammalian life.

Human Communications

This program area focuses on studies of the complex mechanisms whereby human beings receive information from their environment and then express themselves through coordinated interactions of their organ systems. The normal development of this complicated process resulting in language and speech will receive primary emphasis.

NATIONAL INSTITUTE OF DENTAL RESEARCH

MISSION OF THE NATIONAL INSTITUTE OF DENTAL RESEARCH

The National Institute of Dental Research—

Conducts, assists, and fosters research and training in matters relating to the causes, prevention, diagnosis, and treatment of dental diseases and conditions.

Maintains close relationships with the Chief Dental Officer, PHS; the Bureau of Medical Services; the National Advisory Dental Research Council; and, as necessary, with other public and private agencies conducting related activities.

IMPORTANT EVENTS IN THE HISTORY OF NIDR

1931—The Public Health Service created a Dental Hygiene Unit at the National Institute of Health and designated Dr. H. Trendley Dean as the first dental research worker. His primary function was to apply principles of epidemiology to a series of community studies on the oral disease known as mottled enamel.

1945—Following fluoridation of the water supply in Grand Rapids, Mich., annual examinations of children were begun to study the effects of fluorides on the development of dental caries.

1948—On June 24, President Harry S. Truman signed Public Law 755, the National Dental Research Act, creating the National Institute of Dental Research and the National Advisory Dental Research Council. In September, Dr. H. Trendley Dean was appointed Director of the Institute.

1949—The first direct appropriation was made for dental research grants. The first fellowships were awarded.

1953—Dr. Francis A. Arnold, Jr., was appointed NIDR Director in April, succeeding Dr. Dean who retired from the PHS.

1954—Results of the first 10 years of the Grand Rapids study firmly established water fluoridation as a safe, effective, and economical procedure for the control of dental caries.

1957—Research with germ-free animals was initiated in Dental Institute laboratories to determine the influence of bacteria on tooth decay.

On October 30 the first meeting of the Board of Scientific Counselors was held. This Board was established to provide advice to NIDR on matters of general policy as they relate to the intramural program.

1958—A program of training grants to universities was established to encourage trainees to secure Ph. D. degrees in disciplines basic to dental research.

1960—On September 21 the cornerstone was laid for the Dental Institute building (Building 30) at NIH.

1961—Secretary of Health, Education, and Welfare Abraham A. Ribicoff dedicated Building 30.

LEGISLATIVE CHRONOLOGY OF NIDR

June 24, 1948—President Harry S. Truman signed Public Law 755 establishing the National Institute of Dental Research to conduct, support, and foster research investigations on the causes, treatment, and prevention of dental diseases and conditions.

August 1, 1958—President Dwight D. Eisenhower signed an HEW appropriation bill which included provisions to finance the construction of laboratory facilities to house NIDR.

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL INSTITUTE OF DENTAL RESEARCH

H. Trendley Dean, D.D.S.

Dr. H. Trendley Dean was born in East St. Louis, Ill., on August 25, 1893. He received his D.D.S. degree in St. Louis in 1916.

A pioneer in dental research, Dr. Dean was internationally known as an authority on the relation of fluorides to dental health. He developed a method for quantitatively measuring dental fluorosis and demonstrated a significant difference in dental decay in fluoride and nonfluoride areas.

Dr. Dean became an Acting Assistant Dental Surgeon in the Public Health Service in 1921, and held various posts until September 17, 1948, when he became Director of the National Institute of Dental Research, a post which he held until March 31, 1953.

During this time Dr. Dean received the Gorgas Award of the Association of Military Surgeons, the John M. Goodell Prize of the American Water Works Association for his work in fluoridation, the Jarvis Medal, Lasker Award, Distinguished Service Award of the American Association of Public Health Dentists, and the Award of Merit from Georgetown University.

Dr. Dean served as Secretary of the Council on Dental Research of the American Dental Association from 1953–59. He died in 1962.

Francis A. Arnold, Jr., D.D.S.

Dr. Francis A. Arnold was born in Orrville, Ohio, on December 30, 1910. He received his B.S. degree from Western Reserve University in 1932 and his D.D.S. degree from that university in 1934.

After serving his internship at the U.S. Marine Hospital in Cleveland, Ohio, from 1934–36, Dr. Arnold was commissioned in the Public Health Service.

Dr. Arnold served in the Dental Research Section of NIH in 1937, and as Assistant Chief of the National Institute of Dental Research from 1943–48. He was Associate Director of NIDR from 1948 to April 1, 1953, when be became its Director.

A pioneer in the study of fluorides and epidemiological studies of the effects of fluoridation, Dr. Arnold has received an honorary Sc. D. degree from Western Reserve University, as well as the Callahan Award, Gies Award, and Dean Award.

Total NIDR Appropriations for Grants and Direct Operations, Fiscal Years 1950–65

Fiscal year	Total grants	Direct operations	Total
1950	$235,000	$1,545,000	$1,780,000
1951	271,000	1,683,850	1,954,850
1952	271,000	1,346,654	1,617,654
1953	271,000	1,379,000	1,650,000
1954	271,000	1,469,000	1,740,000
1955	521,000	1,469,000	1,990,000
1956	521,000	1,655,000	2,176,000
1957	3,700,000	2,326,000	6,026,000
1958	3,825,000	2,605,000	6,430,000
1959	4,500,000	2,920,000	7,420,000
1960	6,226,000	3,793,000	10,019,000
1961	10,088,000	5,412,000	15,500,000
1962	13,984,000	3,356,000	17,340,000
1963	17,525,000	3,674,000	21,199,000
1964	15,775,000	3,914,000	19,689,000
1965	15,303,000	4,780,000	20,083,000

Source: Financial Management Branch, Office of the Director NIH.

He was president of the International Association for Dental Research in 1953 and served as vice president of the Scientific Commission of the Federation Dentaire Internationale from 1954 to 1961.

SPECIAL PROGRAMS OF NIDR

NIDR–NINDB Project at the Clarke School for the Deaf in Northampton, Mass.

In June 1962, as an outgrowth of NIDR genetic studies, NIDR, in cooperation with NINDB, established a research project at the Clarke School for the Deaf in Northampton, Mass., to study the types and causes of childhood deafness and to observe the mechanisms involved.

Collaborative Research Studies

In 1963 a Collaborative Research Office was established to administer contracts with profit and nonprofit organizations, primarily for expansion of reseach related to restorative materials used in dentistry.

NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES

MISSION OF THE NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES

The National Institute of General Medical Sciences—

Supports, fosters, and coordinates research training in the areas of basic medical, biological, preclinical, clinical, and related natural and behavioral sciences, the methods of science, and broad multidisciplinary research programs and studies.

Provides research project grants to public and private institutions and individuals in fields related to its areas of interest.

Provides research training grants, fellowships, and career awards to increase the availability of trained professional researchers within its area of interest.

Collects and disseminates research information related to the general medical sciences.

IMPORTANT EVENTS IN THE HISTORY OF NIGMS

July 16, 1958—In conjunction with the reorganization of the Division of Research Grants, the Secretary of the Department of Health, Education, and Welfare approved establishment of the Division of General Medical Sciences.

October 17, 1962—Congress authorized the establishment of the National Institute of General Medical Sciences.

January 30, 1963—The Secretary, DHEW, approved establishment of NIGMS, with Clinton C. Powell as the first Institute Director.

October 8, 1963—National Advisory General Medical Sciences Council established.

August 1, 1964—Dr. Frederick L. Stone named second Director of NIGMS.

LEGISLATIVE CHRONOLOGY OF NIGMS

October 17, 1962—Public Law 87–838, 87th Congress, H.R. 11099, authorized the Surgeon General to establish an institute for the conduct and support of research and research training in the general or basic medical sciences and related natural or behavioral sciences which have significance for two or more other Institutes (of the NIH), or are outside the general area of responsibility of any other Institute.

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES

G. Halsey Hunt, M.D.

Born in Newton, Mass., Dr. G. Halsey Hunt received his M.D. degree from Columbia University College of Physicians and Surgeons in 1928. After being commissioned in the U.S. Public Health Service in 1936, Dr. Hunt was on the surgical staffs of several Public Health Service hospitals, and in 1947 and 1949, respectively, was named Assistant Chief, then Chief, of the Division of Hospitals.

From 1952 to 1956 he was Assistant Surgeon General and Associate Chief of the Bureau of Medical Services. Dr. Hunt was assigned to NIH in 1956 when he became the first Director of the Center for Aging Research, before being named Chief, DGMS, on July 16, 1958. Dr. Hunt retired from the Public Health Service on April 1, 1962, to become executive director of the Educational Council for Foreign Medical Graduates.

Clinton C. Powell, M.D.

A native of Hartford, Conn., Dr. Clinton C. Powell received his M.D. degree from Boston University in 1944. Commissioned in the U.S. Public Health Service in 1946, Dr. Powell received training and experience in radiology before coming to NIH in 1954.

He has served in various capacities at NIH, in the Clinical Center, the National Cancer Institute, the Division of Research Grants, eventually becoming Deputy Chief of the Division. In 1961 he was appointed Assistant Director of the National Institute of Allergy and Infectious Diseases, serving in that position until his appointment as Chief, DGMS, July 20, 1962. When the Division was elevated to institute status on January 30, 1963, Dr. Powell became the first Director of the new Institute.

In July 1964, Dr. Powell retired from Government service to accept appointment as associate coordinator of medical and health sciences at the University of California.

Frederick L. Stone, Ph. D.

A native of Biloxi, Miss., Dr. Frederick L. Stone received his B.S. degree from Middlebury College, Vermont, in 1937. From the University of Rochester in New York he received his M.S. degree in 1942 and the Ph. D. in 1946. After service in the U.S. Marine Corps he was commissioned in the U.S. Public Health Service and was stationed at NIH until 1954, serving as Chief of the Research Fellowships Branch, DRG, and Chief of Extramural Programs, NINDB.

After a short absence during which he was director of the Medical and Scientific Department of the National Multiple Sclerosis Society and assistant vice chancellor for professsional services in the Schools of the Health Professions at the University of Pittsbugh, he returned to NIH in 1956 as Assistant to the Associate Director, NIH, from 1956 to 1957; as Assistant Chief, Division of Research Grants, from 1957 to 1958; and as Assistant Chief, Division of General Medical Sciences, and Chief of its Research Training Grants Branch, from 1958 to 1962. On July 15, 1962, he became Chief of the new Division of Research Facilities and Resources. Dr. Stone was appointed Director of the National Institute of General Medical Sciences on August 1, 1964, and served as Acting Chief, DRFR until June 30, 1965.

SPECIAL PROGRAMS OF NIGMS

Hospital Computer System

A new computer-based system designed to simplify handling of communications and medical records in hospitals is being developed at Massachusetts General Hospital, with contract support from NIGMS and the American Hospital Association. Bolt Beranek & Newman, Inc., a Cambridge, Mass., firm has been responsible for the engineering development of the project. By maintaining a comprehensive record of patient care

that is readily accessible in a variety of combinations, the system will be a useful resource in clinical research and in studies of patient-care procedures.

Pharmacology-Toxicology Programs

In addition to present support in this field, the Institute has initiated a new program of basic studies involving research contracts with industrial laboratories and independent research institutes, and grant support for university-based centers of research and training in pharmacology-toxicology, to cope with problems arising from present-day usage of potent drugs and the introduction of various chemicals into the environment. In order to further the broad program interests of NIH, the Institute is serving as a focal point for the collection and coordination of information pertaining to pharmacology-toxicology programs in all the Institutes of the NIH.

NATIONAL INSTITUTE OF MENTAL HEALTH

MISSION OF THE NATIONAL INSTITUTE OF MENTAL HEALTH

The National Institute of Mental Health—

Plans, conducts, coordinates, supports, and evaluates a national program for the improvement of the mental health of the people of the United States.

Conducts and supports basic, clinical, collaborative, and development research in the broad field of mental health.

Conducts and supports mental health manpower training for research and service.

Applies research knowledge in field studies, investigations, and demonstrations.

Provides consultative and technical services to States, communities, and others.

Collects, evaluates, analyzes, interprets, and disseminates information on various aspects of the mental health field.

Provides leadership and coordination for all aspects of the Public Health Service's mental health program.

IMPORTANT EVENTS IN THE HISTORY OF NIMH

January 19, 1929—The Narcotics Control Act was passed providing for construction of two hospitals for drug addicts and authorizing a Narcotics Division in the Public Health Service.

June 14, 1930—Public Law 357 was passed authorizing creation of a separate Bureau of Narcotics in the Treasury Department and changing the Narcotics Division of the Public Health Service to the Division of Mental Hygiene. The law gave the Surgeon General authority to investigate the causes, treatment, and prevention of mental and nervous diseases.

May 29, 1935—A narcotics "farm" at Lexington, Ky., was completed and opened.

October 28, 1938—The narcotics hospital at Fort worth, Tex., was dedicated.

July 3, 1946—The National Mental Health Act was signed by President Harry S. Truman.

April 15, 1949—NIMH was officially established as one of the National Institutes of Health. Dr. Robert H. Felix became Director.

December 18, 1964—Dr. Stanley F. Yolles became second Director of NIMH.

LEGISLATIVE CHRONOLOGY OF NIMH

July 3, 1946—The National Mental Health Act, Public Law 487, 79th Congress, 2d session, provided for three closely integrated functions: (*a*) research, (*b*) training, and (*c*) assistance to State programs. In 1949, the National Institute of Mental Health was established under terms of this act.

July 28, 1955—The Mental Health Study Act, Public Law 84–182, authorized the Surgeon General, PHS, to award grants to nongovernmental organizations for partial support of a nationwide study and reevaluation of the problems of mental illness. Un-

der this act, the Joint Committee on Mental Illness and Health was awarded grant support for 3 years.

July 28, 1956—The Alaska Mental Health Enabling Act, Public Law 830, 84th Congress, provided for territorial treatment facilities to obviate transportation of the mentally ill outside the Territory of Alaska.

August 2, 1956—The Health Amendments Act of 1956, Public Law 911, 84th Congress, 2d session, title V, provided for Public Health Service grant support in developing improved methods of care and treatment of the mentally ill.

October 24, 1963—The Maternal and Child Health and Mental Retardation Planning Amendments of 1963, Public Law 88–156, amended the Social Security Act to assist States and communities in preventing and combating mental retardation through expansion and improvement of the maternal and child health and crippled children's programs; through provision of prenatal, maternity, and infant care for individuals with conditions associated with childbearing which may lead to mental retardation; and through planning for comprehensive action to combat mental retardation, and for other purposes.

October 31, 1963—The Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963, Public Law 88–164, authorized a $329 million program which includes matching grants for community mental health centers, research, and education of teachers for handicapped children, with the various undertakings running 3 or 4 years.

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL INSTITUTE OF MENTAL HEALTH

Robert Hanna Felix, M.D.

Born in Downs, Osborne County, Kans., May 29, 1904, Dr. Robert H. Felix was influenced in his choice of a career by his physician father. He attended the University of Colorado where he obtained his degree in medicine in 1930. Awarded a Commonwealth Fund fellowship, he received his psychiatric training at Colorado Psychopathic Hospital. He graduated from Johns Hopkins University in 1942 with a master of public health degree.

Dr. Felix joined the PHS Commissioned Corps in 1933. From then until 1941, he was Clinical Director, Medical Center for Federal Prisoners, and Clinical Director and Executive Officer, U.S. Public Health Service Hospital in Lexington, Ky. During the war, Dr. Felix served as psychiatrist and senior medical officer with the U.S. Coast Guard Academy at New London, Conn.

Returning to the Public Health Service in 1944, he served first as Assistant Chief of the Division of Hospitals in the Bureau of Medical Services and was then appointed Chief of the Bureau of Mental Hygiene. When this Bureau became the National Institute of Mental Health on April 15, 1949, Dr. Felix was made Director.

Dr. Felix is a diplomate in psychiatry of the American Board of Psychiatry and Neurology and a fellow of the American Psychiatric Association, the American Medical Association, the American College of Physicians and Surgeons, and the American Public Health Association. In 1957, he was commissioned Assistant Surgeon General of the U.S. Public Health Service. Upon his retirement in 1964 to become dean of the College of Medicine at St. Louis University, he held the two-star rank which is comparable to that of major general in the Army.

Stanley F. Yolles, M.D.

Born in New York City, April 19, 1919, Dr. Stanley F. Yolles first entered the medical field as a parasitologist in tropical medicine. He received his A.B. degree from Brooklyn College and M.A. degree from Harvard University in 1939 and 1940, respectively. From 1940 until the end of World War II, he was assigned to the U.S. Army Corps of Engineers in British Guiana and the British West Indies.

Dr. Yolles then attended the New York University College of Medicine where he received his M.D. degree in 1950. At the same time, he became a member of the Commissioned Corps of the Public Health Service, in which he later completed his psychiatric residency at the PHS hospital in Lexington, Ky., in 1954. He was then assigned as a staff psychiatrist at the NIMH Mental Health Study Center, of which he later became the Director. From 1960 to 1963, he served as Associate Director for Extramural Programs, NIMH, and was appointed Deputy Director of the Institute in August 1963.

Dr. Yolles was appointed Institute Director and Assistant Surgeon General of the U.S. Public Health Service in December 1964 upon the retirement of former Director, Dr. Robert H. Felix. Dr. Yolles is a

member of several professional societies, including the American Medical Association, the American Psychiatric Association, the American Association for the Advancement of Science, the American Public Health Association, and the New York Academy of Science.

Total NIMH Appropriations for Grants and Direct Operations, Fiscal Years 1948–65

Fiscal year	Total grants	Direct operations	Total
1948	.....	.....	[1] $4, 250, 000
1949	.....	.....	9, 128, 000
1950	$7, 400, 000	$1, 266, 000	8, 666, 000
1951	7, 901, 000	1, 604, 000	9, 505, 000
1952	8, 769, 000	1, 792, 737	10, 561, 737
1953	8, 685, 000	2, 210, 000	10, 895, 000
1954	9, 275, 000	2, 820, 000	12, 095, 000
1955	10, 409, 000	3, 738, 500	14, 147, 500
1956	13, 122, 000	4, 879, 000	18, 001, 000
1957	28, 073, 000	7, 124, 000	35, 197, 000
1958	31, 049, 000	8, 168, 000	39, 217, 000
1959	42, 443, 000	9, 976, 000	52, 419, 000
1960	56, 684, 000	11, 406, 000	68, 090, 000
1961	87, 734, 000	13, 166, 000	100, 900, 000
1962	92, 491, 000	16, 385, 000	108, 876, 000
1963	122, 365, 000	21, 234, 000	143, 599, 000
1964	159, 479, 000	23, 809, 000	183, 288, 000
1965	163, 703, 000	24, 229, 000	187, 932, 000

[1] Excludes funds for support of narcotics hospitals at Lexington and Fort Worth.

Source: Financial Management Branch, Office of the Director, NIH.

NIMH FIELD STATIONS OR OTHER SPECIAL FACILITIES

The NIMH Addiction Research Center
Lexington, Ky.

The Center had its beginning in the scientific studies of the addicting qualities of pain-relieving drugs at the U.S. Penitentiary, Fort Leavenworth, Kans. These studies were transferred to the U.S. Public Health Service hospital at Lexington when it opened in 1935. At present, studies at the Center include biochemical, neuropharmacology, neurophysiological, and psychological studies of drug addiction, as well as studies of chronic barbiturate and alcohol addiction. In addition, the Center is conducting basic research on the psychotomimetic drugs, agents which produce symptoms similar to mental illness and which are being used as research tools. The Center also is responsible for identifying new drugs which should be considered to be within the purview of narcotics control activities carried on by the United States and the United Nations.

The Clinical Neuropharmacology Research Center, NIMH
St. Elizabeths Hospital
Washington, D.C.

Established in 1957, the Center is engaged in a broad program of studies of the effects of drugs on mental function in man, with special reference to their bearing on problems of mental disorder. The location of the Center insures direct contact with the special phenomena presented by mental illness in a mental hospital. Patients are selected from the general hospital population at St. Elizabeths so as to comprise a group representative of the kinds of mental disorders to be found in most public mental hospitals. One aim of the Center is to define special research problems presented by mental hospital populations. Another aim, through the establishment of suitable laboratories for experimental work in a mental hospital setting, is to bring the hospital closer to new knowledge being accumulated by the behavioral sciences.

The Mental Health Study Center, NIMH
Adelphi, Md.

The Center was established in 1948 under the provision of the National Mental Health Act through the cooperation of interested citizens and organizations of Prince Georges County, the county and State health departments, and the Mental Hygiene Division of the U.S. Public Health Service. During the first 6 years of its existence, the Study Center was known as the Prince Georges County Mental Health Clinic and received its present name in 1954. As a demonstration program in community mental health, the goals of the clinic were to study methods through which its activities could be made a part of the overall health program of the county and to determine methods which communities could apply to attack the factors contributing to psychiatric disorders.

SPECIAL PROGRAMS OF NIMH

Special Grants

Special grants are a device to temporarily extend the facilities of NIMH to obtain knowledge in areas

deemed important for exploration and development. This activity is the major responsibility of the Professional Services Branch. However, it is designed to further the program of the Institute as a whole, and other branches participate in it to varying degrees. Such grants may take the form of research projects, generally of a pilot nature, of conferences of experts, or of the development of special staffs to coordinate research and development in an applied field. An example would be studies of geriatric mental illness involving experimentation with selected research tools and methods in medicine, psychology, and sociology with the hope of developing adaptations useful in studies of this age group.

Professional and Technical Assistance

In addition to grants to States and mental health project grants, NIMH provides professional and technical assistance to the States. The object of this type of aid is program development—experimentation with new ways to care for the mentally ill and the application of new research findings to everyday operations. The Institute provides consultation services to plan and evaluate State mental health programs, serves as a clearinghouse for information, and helps the States with the inservice training of staff members. At the request of a State Governor, the Institute conducts surveys on mental health problems of special concern to the State. Technical assistance projects are special conferences on mental health problems important to the States. Conferences have helped develop programs on various aspects of alcholism, criminality, cleric and lay leadership in promoting mental health, school mental health, and industrial mental health.

Epidemiological Studies

Psychiatric case registers are one of the basic tools in epidemiological investigations in the field of mental disorders. The complex pattern of mental health services requires coordination not only of administration but also of statistical data for effective program evaluation and planning. The primary purpose of a case register is to create a central file or unduplicated count of patients and the record of each individual's longitudinal service experience, thus facilitating the systematic study of the illness or the type of care. By June 1962, seven psychiatric case register projects had been developed. In addition to the value for epidemiological research, as the data are tabulated and analyzed, it is anticipated that these registers will provide important information on program operations for evaluation and planning.

NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

MISSION OF THE NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

The National Institute of Neurological Diseases and Blindness—

Conducts, fosters, coordinates, and guides research on the causes, prevention, diagnosis, and treatment of the neurological, sensory, and communicative disorders, and conducts basic research in related scientific disciplines.

Provides grants-in-aid to public and private institutions and individuals in fields related to its areas of interest, including research project, program project, and center grants.

Provides training grants and awards to increase trained professional research manpower in neurological fields.

Conducts a diversified program of intramural and collaborative research in its own laboratories, branches, and clinics.

Collaborates with various agencies in collecting and disseminating material related to neurological and sensory diseases.

IMPORTANT EVENTS IN THE HISTORY OF NINDB

1950—On August 15 President Truman signed Public Law 81–692, establishing the National Institute of Neurological Diseases and Blindness.

1951—NINDB received its first budget of $1,232,253 and Dr. Pearce Bailey was appointed first Director.

1952—The first research fellowships and clinical traineeships were awarded.

1953–54—A program of clinical investigation was initiated, including medical neurology, surgical neurology, and electroencephalography. Training programs in neurology and ophthalmology were initiated.

1955—Basic science training grants were initiated.

1956—The clinical investigations program was expanded to include work in ophthalmology.

1957—Training programs in otolaryngology and pediatric neurology were begun.

1957—Field investigations involving collaborative and cooperative clinical studies were begun and the initial phase of the Collaborative Perinatal Project was started.

1959—Dr. Richard L. Masland became the second Director of NINDB.

1960—The joint basic research program of NINDB and NIMH was divided and organized into two basic research programs.

1962—Funds were appropriated for professional and technical information assistance, neurosurgery and neuroradiology training grants were initiated, and the Laboratory of Molecular Biology was established.

1963—Developmental graduate training grants were initiated.

LEGISLATIVE CHRONOLOGY OF NINDB

August 15, 1950—Public Law 692, 81st Congress, established the National Institute of Neurological Diseases and Blindness "for research on neurological diseases (including epilepsy, cerebral palsy, and multiple sclerosis) and blindness."

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE NATIONAL INSTITUTE OF NEUROLOGICAL DISEASES AND BLINDNESS

Pearce Bailey, M.D.

Dr. Pearce Bailey was the first Director of the National Institute of Neurological Diseases and Blindness. Prior to assuming the Directorship in 1951, a post which he held until 1959, Dr. Bailey was Chief of Neurology of the Veterans' Administration. He served as Director of International Neurological Research for the NINDB in Antwerp, Belgium, from 1959 until 1962, and is presently Special Assistant to the Director, with offices in Puerto Rico.

Dr. Bailey received the Ph. D. from the University of Paris (Sorbonne) and his M.D. from the Medical College of South Carolina in 1941. He is a member of numerous professional societies, is Secretary-Treasurer General of the World Federation of Neurology, and is the past president of the American Academy of Neurology. He is the author of numerous articles and in 1959 prepared the English version of *J. M. Charcot—His Life and Work.*

Richard L. Masland, M.D.

Born in Philadelphia on March 24, 1910, Dr. Masland received his M.D. from the University of Pennsylvania Medical School in 1935. He served as a fellow and associate in neurology at the University of Pennsylvania from 1938 to 1946, and a fellow in psychiatry at the Pennsylvania Institute for Mental Hygiene in 1946. On leave from the university, he was an officer in the U.S. Army from 1942 to 1945, as Director of the Department of Physiology, School of Aviation Medicine. For 10 years prior to coming to NINDB in 1957, he was professor of neurology at the Bowman Gray School of Medicine, Winston-Salem. On leave, he served as research director of the National Association for Retarded Children in 1955–56. Dr. Masland has written many articles and is the coauthor of a book entitled *Mental Subnormality,* which appeared in 1958.

A diplomate of the American Board of Psychiatry and Neurology, Dr. Masland has served as president of the American Epilepsy Society, vice president of the American Neurological Association, vice president of the Association for Research in Nervous and Mental

Diseases, and member of the board of trustees of the American Academy of Neurology.

Total NINDB Appropriations for Grants and Direct Operations, Fiscal Years 1954–65

Fiscal year	Total grants	Direct operations	Total
1954.....	$3, 354, 000	$1, 146, 000	$4, 500, 000
1955.....	5, 054, 000	2, 546, 500	7, 600, 500
1956.....	6, 300, 000	3, 561, 000	9, 861, 000
1957.....	14, 280, 000	4, 370, 000	18, 650, 000
1958.....	16, 250, 000	5, 137, 000	21, 387, 000
1959.....	23, 166, 000	6, 237, 000	29, 403, 000
1960.....	33, 908, 000	7, 579, 000	41, 487, 000
1961.....	47, 867, 000	8, 733, 000	56, 600, 000
1962.....	56, 240, 000	14, 572, 000	70, 812, 000
1963.....	67, 022, 000	16, 484, 000	83, 506, 000
1964.....	74, 241, 000	13, 434, 000	87, 675, 000
1965.....	73, 147, 000	14, 674, 000	87, 821, 000

Source: Financial Management Branch, Office of the Director, NIH.

NINDB FIELD STATIONS OR OTHER SPECIAL FACILITIES

Domestic Unit

Patuxent Wildlife Research Center Project, NINDB Patuxent, Md.

This project, begun in 1963, is directed toward the investigation of latent infections which may cause neurological disorders in man. Certain degenerative diseases of the nervous system are known to occur in wild animals and some are believed to be infectious. Efforts are being made to isolate slow-acting viruses which may cause such human diseases as multiple sclerosis, chronic epidemic encephalitis, kuru, ALS, and certain forms of childhood epilepsy. A building for work with primates was constructed in 1964 for the Institute to facilitate research in virus processes that produce degenerative, slow-developing diseases of man and animals.

Oversea Units

Laboratory of Perinatal Physiology of the NINDB San Juan, P.R.

Primate studies at this laboratory, established in 1956, are increasing knowledge of the perinatal causes of cerebral palsy, mental retardation, and other developmental neurosensory disabilities in humans. These investigations of harmful factors producing injury to newborn monkeys complement the Institute's Collaborative Perinatal Project. Laboratory facilities include a free-ranging colony of monkeys on the island of Cayo Santiago, P.R., and a caged breeding colony on the grounds of the USPHS quarantine station in San Juan. The physical and neurological development of animals of known age and state of health in the free-ranging and caged colonies are being compared. These studies provide valuable observations of deviations of development imposed by the experimental environment.

Long-range research on the central nervous system, particularly its developmental aspects, is now the Laboratory's major focus. Broad interests of the Laboratory include neuroanatomy, physiological analysis of behavior, neurophysiology, and primate enconology.

New Guinea Projects NINDB

Since 1963, kuru, a chronic progressive disease of the central nervous system, has been studied in primitive populations on New Guinea. Efforts are being made to determine whether the disease is caused by a slow virus infection. Another project involves investigating the high incidence of a wide variety of congenital defects of the central nervous system associated with hyperendemic goiter in a particular tribe. This group is being studied in order to learn more about a wide array of nervous system defects, such as congenital deaf-mutism, and mental and motor abnormalities associated with cretinism.

This oversea unit is also a background for ethno-environmental studies of child growth and development and disease patterns in primitive cultures.

Epidemiology and Genetics Center, NINDB, Guam

Since 1957, the unusual frequency of amyotrophic lateral sclerosis (ALS), discovered in an epidemiological survey, has been studied by a branch of NINDB. A laboratory has been established on Guam, where a form of ALS is over 100 times more common than in the continental United States, to obtain materials for epidemiologic and genetic studies. Originally ALS was thought to be a genetically determined, inherited disease, but mounting evidence seems to indicate that some environmental factor may be responsible. Extensive analysis of family histories in a village

(Umatac) where prevalence is extremely high are nearing completion.

Discovery of a second focus of the disorder in the Kii Peninsula of Japan has heightened NINDB efforts, in cooperation with other scientists, to ascertain the pattern of ALS distribution in the West Pacific islands and to evaluate as far as possible all suspicious environmental factors, including geographic, socioeconomic, dietary, and occupational features.

SPECIAL PROGRAMS OF NINDB

Collaborative Perinatal Project

The Collaborative Project on Cerebral Palsy, Mental Retardation, and Other Neurological and Sensory Disorders of Infancy and Childhood was initiated in 1957. It is a unified effort of 14 medical centers across the country and the NINDB. The object of the investigation is to determine relationships between factors affecting women during pregnancy, labor, and delivery and the neurological and sensory disorders of their offspring. More than 50,000 pregnancies are being studied. Extensive data are now being analyzed. Strong centers have been created within collaborating institutions for perinatal research. These centers are providing a broad research base for continuing investigations of prenatal and postnatal factors in the etiology of disorders of the nervous system and sense organs in infancy and childhood.

Model Reporting Area for Blindness Statistics

Ten States are participating in this project, established in 1962, to obtain more adequate statistics on the incidence and prevalence of blindness in the United States. With the cooperation of voluntary and official agencies, these 10 States now maintain a statewide register of blind persons. The first tabulations for the Model Reporting Area have become available; with the expected addition of new States which will maintain a register, more accurate estimates on national distribution of blindness will be available for the first time.

Cerebrovascular Disorders Projects

The NINDB has long recognized the significance of stroke—the third largest cause of death in the Nation—as a national problem, and has developed a broad program to attack it. This program is implemented through intramural research at Bethesda, and extramural support for numerous research projects and cooperative studies. In addition, three multidisciplinary research centers on cerebrovascular disease, located at Minneapolis, New York City, and Detroit, have been established and are being supported.

In cooperation with the National Heart Institute, a Joint Council Subcommittee on Cerebrovascular Disease was formed in 1961 to provide for an organized research attack on this disease. Activities of the Subcommittee include: development of the *Cerebrovascular Bibliography*, a tool for research in cerebrovascular disease; organization of the Fourth Princeton Conference on Cerebrovascular Disease (1964) and the planning of the Fifth Princeton Conference on Cerebrovascular Disease (1966); a status report on cerebrovascular disease (1961) and its revision (1965); a feasibility study for an information center on cerebrovascular disease, and several workshops.

A major undertaking of the Institute in the cerebrovascular field has been the Cooperative Study of Intracranial Aneurysms and Acute Subarachnoid Hemorrhage, established in 1957. In this study, investigators from 24 laboratories (including one each in Great Britain, Sweden, and Australia) are evaluating the four most promising treatments of aneurysms. Personnel at the Study's central registry in Iowa City are analyzing the accumulated data on more than 5,800 cases, and the first major report of the study is being prepared for publication in 1965.

Research-Information Disease Study Centers

The first integrated research and scientific-information center, a prototype for a network of others planned in major disease categories, was established in 1964, when the Parkinson's Disease Study Center opened at Columbia University. In addition to conducting research, these NINDB-supported centers will maintain an information service to accumulate, evaluate, and disseminate data on other research in the specific field.

During its opening year, the center on Parkinsonism at Columbia developed broadly based research and information exchange programs, and sponsored an international conference focused on the control of involuntary movement.

DIVISION OF BIOLOGICS STANDARDS

MISSION OF THE DIVISION OF BIOLOGICS STANDARDS

1. The Division of Biologics Standards shall be responsible for administering the regulation of biologic products, as set forth in section 351 of the Public Health Service Act, as amended. It shall be responsible for establishing and maintaining the highest possible level of testing and inspection of production facilities for biologic products produced or offered for sale in the United States, to ensure that these are at all times adequate to protect and preserve the health and best interests of the American people. Its specific functions shall include—

(*a*) Technical development of suitable proposed regulations and minimum standards governing the safety, purity, and potency of biologic products.

(*b*) Administering a program of licensing laboratories engaged in the manufacture of biologic products and controlling such products in interstate commerce, involving inspection of licensed laboratories and laboratories requesting licenses, conduct of control tests, development of standards, and development and maintenance of enforcement regulations.

2. The Division of Biologics Standards in accordance with section 301 of the Public Health Service Act, as amended, shall conduct research on problems related to the development, manufacture, testing, and use of vaccines, serums, toxins, antitoxins, and analogous products, including human blood and its derivatives. It shall conduct other studies to assure safety, purity, and potency of biologic products, to improve existing products, and to develop new products.

—*PHS General Circular No. 51, Supplement 10, of June 21, 1955*

IMPORTANT EVENTS IN THE HISTORY OF DBS

1902—Public Law No. 244, 57th Congress, authorized an act to regulate the sale in interstate commerce of viruses, serums, toxins, and analogous products applicable to the cure or prevention of diseases of man. The technical responsibilities of the biologics program were assigned to the Hygienic Laboratory.

1937—Laboratory of Biologics Control created within the then National Institute of Health.

1948—Laboratory of Biologics Control made part of the National Microbiological Institute, NIH.

1955—Public Health Service General Circular No. 51, Supplement 10, establishing the Division of Biologics Standards.

1956—Appointment of Dr. Roderick Murray as Director of the Division of Biologics Standards.

1960—Formal dedication ceremonies for the new Division of Biologics Standards building, in which Their Majesties the King and Queen of Thailand participated.

1960—Three new laboratories created within the Division: Biophysics and Biochemistry, Viral Immunology, and Virology and Rickettsiology.

1963—The Division's first year of operation under a separate annual appropriation. (Funds formerly received from "General Research and Services Appropriation.")

1963—Responsibility for review of investigational new drugs (biologicals) assigned to DBS in accordance with FDA drug amendments of 1962.

1964—Laboratory of Pathology created within the Division, bringing the total number of laboratories to seven.

LEGISLATIVE CHRONOLOGY OF DBS

July 1, 1902—Public Law No. 244, 57th Congress, authorized an act to regulate the sale in interstate commerce of viruses, serums, toxins, and analogous products applicable to the cure or prevention of diseases of man.

BRIEF BIOGRAPHICAL SKETCH OF THE DIRECTOR OF THE DIVISION OF BIOLOGICS STANDARDS

Roderick Murray, M.D.

Dr. Murray was appointed Director of the Division of Biologics Standards in 1956. He joined the staff of the National Institutes of Health as a Public Health

Service commissioned officer in 1947 and has been involved in biologics control since that time.

Dr. Murray was born in Christchurch, New Zealand, in 1909 and received early education in schools in South Africa and Great Britain. He graduated from the University of the Witwaterstrand, Johannesburg, South Africa, and in 1941 received his medical degree from Harvard Medical School. Upon completion of his internship at Boston City Hospital in 1942, he served as assistant resident until called into service in the U.S. Army. This included 2 years in the South Pacific, where much of his time was devoted to study of blood and parasitic infections.

Dr. Murray is a member of the World Health Organization Expert Committee on Biological Standardization, the Surgeon General's Advisory Committee on Immunization Practice, and the Armed Forces Epidemiological Board Commission on Viral Infections.

DBS Annual Appropriations, Fiscal Years 1964–65

Fiscal year	Amount
1964 [1]	$4,787,000
1965	4,969,000

[1] Funds formerly part of "General Research and Service" appropriation.

Source: Financial Management Branch, Office of the Director, NIH.

DIVISION OF RESEARCH FACILITIES AND RESOURCES

MISSION OF THE DIVISION OF RESEARCH FACILITIES AND RESOURCES

The Division of Research Facilities and Resources—

Provides a focal point for the administration and management of broad NIH programs intended to supply a wide institutional base of support for health-related research.

Aids institutions in the construction of new and remodeled medical research facilities; helps them establish and operate a number of general clinical research centers where research studies can be conducted on patients over a wide range of human diseases; supplies a variety of unusual and highly specialized research services and equipment such as computers; supports regional primate research centers; and stimulates well-balanced institutional research programs through grants for general biomedical research support.

Provides a unified approach to solving the many complex needs of health-oriented research that tend to be institutional, regional, or national in scale.

IMPORTANT EVENTS IN THE HISTORY OF DRFR

April 13, 1962—Announcement of the new Division of Research Facilities and Resources was made by Dr. Luther L. Terry, Surgeon General of the Public Health Service.

July 12, 1962—A memorandum establishing DRFR and outlining its functions and responsibilities was issued by Dr. James A. Shannon, Director of NIH.

July 15, 1962—The Division of Research Facilities and Resources was established.

LEGISLATIVE CHRONOLOGY OF DRFR

August 15, 1950—Congress appropriated $2 million for the establishment of one or two primate research centers under Public Law 81–692.

July 30, 1956—The Health Research Facilities Act of 1956 (title VII of the PHS Act) authorized a Public Health Service program of Federal matching grants to public and nonprofit institutions for the construction of health research facilities.

August 27, 1958—Public Law 85–777 extended title VII for an additional 3-year period.

September 15, 1960—Public Law 86–798 amended the Public Health Service Act to authorize grants-in-aid to universities, hospitals, laboratories, and other public and nonprofit institutions, to strengthen their

programs of research and research training in sciences related to health. The act also authorized the use of funds appropriated for research or research training to be set aside by the Surgeon General in a special account for General Research Support Grants.

October 5, 1961—Public Law 87–395 extended title VII for 1 year, included research training areas, and increased the authorization to $50 million.

October 17, 1962—This act, Public Law 87–838, which authorized the Surgeon General to establish the National Institute of General Medical Sciences and the National Institute of Child Health and Human Developmnet, also extended title VII for an additional 3-year period.

September 24, 1963—Public Law 88–129 amended the Health Research Facilities Act of 1956 to allow grants for multipurpose facilities that would provide teaching space as well as essential research space.

October 31, 1963—Public Law 88–164, known as the "Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963," authorized a total of $329 million over a 5-year period for grants to assist in the construction of mental retardation research centers and community mental health centers, and to train teachers of mentally retarded and other handicapped children.

BRIEF BIOGRAPHICAL SKETCHES OF THE CHIEFS OF THE DIVISION OF RESEARCH FACILITIES AND RESOURCES

Frederick L. Stone, Ph. D.

A native of Biloxi, Miss., Dr. Frederick L. Stone received his B.S. degree from Middlebury College, Vermont, in 1937. From the University of Rochester in New York he received his M.S. degree in 1942 and his Ph. D. in 1946. After service in the U.S. Marine Corps he was commissioned, Regular Corps, in the U.S. Public Health Service and was stationed at NIH until 1954, serving as Assistant Chief of DRG and Special Assistant to the Associate Director of NIH.

After a short absence during which he was director of the Medical and Scientific Department of the National Multiple Sclerosis Society and assistant vice chancellor for professional services in the Schools of the Health Professions at the University of Pittsburgh, he returned to NIH. From 1958 to 1962, he was Assistant Chief of what was then the Division of General Medical Sciences and was Chief of its Research Training Branch.

On July 15, 1962, he was appointed Chief of the new Division of Research Facilities and Resources. He was appointed Director of the National Institute of General Medical Sciences on August 1, 1964, and at that time became Acting Chief of the Division of Research Facilities and Resources holding the latter position until June 30, 1965.

Thomas J. Kennedy, Jr., M.D.

A native of Washington, D.C., Dr. Thomas J. Kennedy, Jr. received his B.S. degree in 1940 from Catholic University in the District of Columbia, and his M.D. degree in 1943 from the Johns Hopkins University, Baltimore, Md. During World War II he was assigned to the U.S. Army's Office of Scientific Research and Development. Following his military service he was appointed, in 1947, to the staff of Goldwater Memorial Hospital, New York City, and was a Research Fellow there from 1949 to 1950.

Dr. Kennedy was commissioned in the U.S. Public Health Service and joined the staff of the National Heart Institute in 1950. He was engaged in research in renal and electrolyte physiology in that Institute's Laboratory of Kidney and Electrolyte Metabolism until 1960, when he was designated Assistant to the Director of Laboratories and Clinics, NIH.

In 1962 he was appointed Special Assistant to the Director for Scientific Communications, NIH. On July 1, 1965, Dr. Kennedy was named Chief of the Division of Research Facilities and Resources.

A member of the American Federation for Clinical Research and the American Physiological Society, Dr. Kennedy has been certified as a Specialist by the American Board of Internal Medicine.

MAJOR PROGRAMS OF DRFR

General Clinical Research Centers

Following a study of research needs in this country, a group of eminent scientists strongly urged increased support of clinical centers where studies could be carried out with patients. Congress concurred with this

recommendation and in 1959 authorized the Public Health Service to establish the general clinical research centers program. Grants awarded through this program, in addition to paying for necessary remodeling of the area to be used for the research center, also may be used for equipment, special laboratories, diet kitchens, salaries for highly trained staff; including nurses, dietitians, and other professionals; and the hospitalization costs of patients. The grants provide an ideal setting where investigators can carry out their research under the best possible conditions.

Regional Primate Research Centers

The primate research center program has six regional and one national center, the latter committed to research on the primate itself. Initial awards have been made for all seven centers. Each award provides two grants, one for total construction costs and one for annual operating costs. The operating award is made each year following a detailed review of the proposed budget by the NIH staff. In every instance, a university is the host institution for the primate research center and, according to the terms of the grants, provides an academic environment of high standard for the centers' staff and visiting scientists.

Areas of research by permanent members of the center staff include the physiology and biochemistry of the fetus and newborn, fetal skeletal biochemistry and growth, congenital abnormalities, studies of neurophysiology, gastrointestinal physiology, skeletal and dental development, psychology, obesity, postnatal development of the primate brain, and cardiovascular physiology, and pathology.

Upon approval by the centers' scientific review committees, the facilities are available to scientists from affiliated institutions in each region as well as to visiting scientists from other parts of the country.

Computer Centers and Other Special Research Resources

A special research resource may be broadly defined as a centralized facility or operational unit necessary to the conduct of a wide variety of health-related research within a university, research institution, or region. Special research resource centers may take many forms; biomedical computer centers, bioinstrumentation and biomedical engineering centers, biochemical analysis and molecular structure laboratories, etc. The research resource award supports the establishment, staffing, and maintenance of special devices or services, laboratories, centers, etc., of a complexity or cost that no single investigator could be expected to support. Thus, the establishment of the resource adds a new dimension and capability to the research potential of the entire host institution. In addition to its providing access to specialized facilities or large and expensive equipment, the resource is expected to assume responsibilities for the performance of in-house research to improve and forward its operational status or posture.

General Research Support Program

General research support grants are awarded, as the title implies, for general support of research and research training in the health field. They are given on a continuing basis to all eligible nonprofit institutions, such as universities, health professional schools, laboratories, hospitals, and research institutes, etc.

The program was started in July 1961 with funds available during fiscal year 1962 for grants to schools of medicine, dentistry, osteopathy, and public health. Those already receiving grants are eligible to reapply on an annual basis. The program has been extended to include schools of pharmacy, nursing, veterinary medicine, hospitals, State and local health agencies, other nonprofit research organizations, and more recently to the components of universities other than the health professional schools. Applicants must be heavily engaged in research related to health, and are required to have a minimum amount of NIH research project awards. Other criteria such as the total research activity of an institution and the complexity of the various projects and programs being conducted are taken into account.

The unique feature of these funds is the degree of flexibility in their use by the institutions.

Health Research Facilities

Between 1948 and 1952 the Service awarded, through two of its Institutes, about $22 million in grants for construction of health research facilities in universities and other nonprofit institutions. Interrupted by the Korean conflict, research construction support began again in 1956 with passage of the Health Research Facilities Act, and has continued since under the guidance of a special national advisory council. These funds, amounting to $330 million from 1956 to 1964, have stimulated construction of almost $1.5 billion worth of buildings, mostly on college and university campuses, throughout the United States. The grants

are made on a matching basis (maximum 50 percent) and may be used only for the research portion of the construction.

In 1963, the Congress authorized the Public Health Service to launch and to encourage a bold, new approach to research and research training in the field of mental retardation. One part of this broad attack on the problem is the authorization of a total of $26 million to extend over a 4-year period for the construction of mental retardation research centers. These grants provide funds up to 75 percent of the total cost of construction.

DIVISION OF RESEARCH GRANTS

MISSION OF THE DIVISION OF RESEARCH GRANTS

Develops, coordinates, and implements policies and procedures governing management of the PHS extramural grants programs; maintains liaison with other grants administration branches of the Public Health Service and grantee institutions to achieve uniform interpretation and effective implementation of policies.

Operates a system of study sections and panels to provide scientific and technical review of research grant and fellowship award applications. Directs the Project Referral System which assigns applications for PHS grant support to Institutes and Divisions of the Public Health Service.

Develops and operates a system for compiling, recording, analyzing, and reporting statistical data on the extramural programs of the Public Health Service.

Provides consultative services to other components of the Public Health Service and to grantee institutions; evaluates the status of PHS-supported scientific research and accomplishments; disseminates scientific and technical information on the extramural programs.

Reviews reports of inventions developed with PHS grants and awards and makes recommendations to the Surgeon General on disposition of invention rights.

IMPORTANT EVENTS IN THE HISTORY OF THE DIVISION OF RESEARCH GRANTS

1944—Public Health Service Act (Public Law 410, sec. 301, July 1) authorized the Surgeon General to "make grants in aid to universities, hospitals, laboratories, and other public or private institutions, and to individuals for such research projects as are recommended by the National Advisory Health Council, or, with respect to cancer, recommended by the National Advisory Cancer Council." The PHS Act also authorizes the award of fellowships in the health sciences.

1946—Research Grants Office established January 1 by order of the Surgeon General under authority of section 301 of the Public Health Service Act to administer a number of research projects transferred to the Public Health Service from the Office of Scientific Research and Development at the end of 1945. Raised to Division status at end 1946.

1946—Dr. C. J. Van Slyke appointed the first Chief of the Division.

1946—DRG assigned responsibility for operating and administering a program of extramural research, research training, and fellowships through grants-in-aid of research in the health and health-related sciences (with the exception of cancer research programs which continued to be operated by the National Cancer Institute.) NOTE: DRG retained the operating responsibility until each successive institute was established, and took over the programs in its categorical fields.

1946—Division of Research Grants instructed by National Advisory Health Council to establish study sections for scientific and technical review of research grant applications, and to explore neglected areas of research in the health sciences.

1947—Central Qualifications Board formally established August 14 to coordinate review of fellowship applications.

1948—Dr. David E. Price appointed Chief of the Division.

1949—Authority delegated to DRG May 17 to make awards, fix stipends, allowances, travel, etc., for PHS

research fellows (authority of sec. 202 of the PHS Act as amended).

1951—Dr. Ernest M. Allen appointed Chief of the Division.

1953—Research Documentation Section created within the Office of the Chief for the collection, storage, and retrieval of scientific information resulting from the research grants program.

1953—Division of Research Grants awarded the Albert Lasker Award "for outstanding administration of a research grants program, enabling thousands of capable scientists in hundreds of institutions to contribute knowledge substantially advancing the Nation's health."

1956—Health Research Facilities Branch established to operate the construction program authorized in the Health Research Facilities Act (Public Law 835, July 30, 1956).

1957—Grants Review Branch established to coordinate activities of the 27 study sections then in existence and to facilitate initial processing, assignment, and study section review of the growing number of research grant applications. Renamed "Research Grants Review Branch" in 1958.

1958—Reorganization of Division bringing together grants management factors in the Division into the newly established Grants Management Branch to maintain fiscal control of PHS grants for research and training through centralized fiscal records and administration.

1958—Responsibility for research grant and training programs in noncategorical areas operated by the Division since 1946 transferred to the newly created Division of General Medical Sciences.

1958—Following transfer of programs mentioned above, Division reorganized to concentrate on review and approval of research grant and fellowship applications, coordination of all extramural programs operated by the Institutes and DGMS, operation of the health research facilities program, and grants management.

1959—Statistics and Analysis Branch created from existing units for the purpose of compiling, recording, analyzing, evaluating, and reporting statistical data on the extramural programs through the PHS Grants and Awards publication and monthly award statements.

1960—Dr. Dale R. Lindsay appointed Chief of the Division.

1961—Reorganization of units responsible for fellowship, research career, and training programs into the Career Development Review Branch to facilitate coordination of the PHS fellowship and career award programs and their preliminary review and to centralize training grant functions.

1961—Grants Associate Program initiated to recruit and train professional staff for the extramural branches of all granting divisions of the Public Health Service, with DRG serving as a primary training locus.

1962—Establishment in the Public Health Service of extramural research programs in environmental health and community health, in addition to NIH programs, DRG assigned overall responsibility for coordinating policies and practices for administration of grants and awards for all PHS extramural programs. Interbureau Advisory Committee created to provide coordination and liaison among the three programs and to act as an advisory group to the Division.

1962—Policy and Procedure Office set up in the Office of the Chief to coordinate the development, review, and implementation of PHS policies on grants and awards.

1962—Health Research Facilities transferred to the newly created Division of Research Facilities and Resources.

1962—Research Grants Index published for first time.

1963—Dr. Eugene A. Confrey appointed Chief of the Division.

1963—Codification of PHS policies and regulations led to the publication of a Grants Manual.

1964—DRG Newsletter initiated.

1964—Reorganization of Division's administrative staff by addition of three associate chiefs to strengthen scientific evaluation, technical communications, analyses of extramural programs, statistical

interpretations of grant support, and staff training and orientation.

DRG STUDY SECTIONS AND COMMITTEES

There are 49 study sections and 2 program-project committees which review and evaluate research grant applications as follows (dates of establishment of present groups, many of which evolved from earlier groups, are in parentheses):

Accident Prevention Research (1959)
Allergy and Immunology A (1956) and B (1963)
Applied Physiology (1963)
Bacteriology and Mycology A (1958) and B (1964)
Behavioral Sciences (1959)
Biochemistry (1951)
Biophysics and Biophysical Chemistry (1955)
Cardiovascular (1946)
Cell Biology (1958)
Chemotherapy (1956)
Communicative Sciences (1962)
Computer Research (1960)
Dental (1946)
Disease Control (1964)
Endocrinology (1951)
Environmental Sciences and Engineering (1960)
Experimental Psychology A (1957) and B (1964)
General Medicine (1957)
Genetics (1958)
Health Services Research (1960)
Hematology (1946)
History of the Life Sciences (1959)
Human Ecology (1960)
Human Embryology and Development (1955)
Medicinal Chemistry A (1959) and B (1962)
Mental Health A (1946) and B (1962)
Metabolism (1959)
Neurology A (1953) and B (1962)
Nursing Research (1957)
Nutrition (1959)
Pathology A (1946) and B (1961)
Pharmacology and Experimental Therapeutics (1953)
Physiological Chemistry (1958)
Physiology (1946)
Psychopharmacology (1959)
Radiation (1955)
Surgery A (1946) and B (1961)
Toxicology (1958)
Tropical Medicine and Parasitology (1949)
Virology and Rickettsiology (1958)
Visual Sciences (1962)

Arthritis and Metabolic Diseases Program-Project Committee (1961)
Child Health and Human Development Program-Project Committee (1964)

CENTRAL QUALIFICATIONS BOARD (1947)

The Board when originally established consisted of informal reviewing groups made up of NIH staff. In 1960, 10 panels were formally established, with membership composed of outside consultants, similarly to study sections. Some panels have since been split to take care of the growing number of fellowship applications. Dates in parentheses denote establishment of panel under its present name. Asterisks denote original 10.

Anatomy* and Pathology (1962)
Behavioral Sciences*
Biochemistry and Nutrition*
Biophysics and Biophysical Chemistry*
Cell Biology*
Clinical Research*
Medicinal and Organic Chemistry (1962)
Mental Health*
Microbiology*
Pharmacology and Endrocrinology*
Physiology (1962)
Psychological Sciences*

Other Fellowship Review Panels

Biostatistics (1960) (NIH staff)
Biomedical Engineering (1961) (NIH staff)
History of Life Sciences (1959) (R.G. Study Section)
Health Services Research (1960) (R.G. Study Section)

BRIEF BIOGRAPHICAL SKETCHES OF THE CHIEFS OF THE DIVISION OF RESEARCH GRANTS

Cassius James Van Slyke, M.D.

Dr. Cassius James Van Slyke came to the National Institutes of Health in 1946 from the Venereal Diseases Division of the Public Health Service where he was

Assistant Chief. In January of that year he became the first Chief of the newly established Research Grants Office, which was elevated to division status a few months later. He remained with the Division until August 1948 when he was named Director of the National Heart Institute. In November 1952 Dr. Van Slyke was appointed Associate Director of the National Institutes of Health until his retirement in December 1959.

Born in Benton, Minn., on December 1, 1900, Dr. Van Slyke received his medical degree from the University of Minnesota in 1928, and entered the Reserve Corps of the Public Health Service the same year.

In 1932 he was commissioned in the Regular Corps of the Public Health Service. From 1936–44, Dr. Van Slyke pursued a distinguished career of experimental research at the PHS Venereal Disease Research Laboratory at Staten Island, N.Y.

Dr. Van Slyke received a Lasker Award from the Public Health Service Association in 1957.

David E. Price, M.D.

Dr. David E. Price has spent his entire professional career with the Public Health Service and has had wide experience in its administration.

A native of San Diego, Calif., Dr. Price was born on July 5, 1914. He received his medical degree at the University of California School of Medicine at Berkeley in 1940 and served his internship at the PHS hospital in San Francisco. He received his doctorate in public health at Johns Hopkins University School of Hygiene and Public Health in 1946.

After a tour of duty with the Venereal Diseases Division of the Service, he was assigned first to the Division of Research Grants as Assistant to the Chief (1946–47) and then to the National Cancer Institute as Chief of the Research Grants Branch (1947–48). In 1948 he returned to the Division of Research Grants as Chief, which post he held until the end of 1950 when he was appointed NIH Associate Director for Extramural Affairs. After a series of key appointments in the Office of the Surgeon General, the Bureau of Medical Services, and the Bureau of State Services, Dr. Price was appointed Deputy Director of NIH in 1960 and Deputy Surgeon General of the Public Health Service in July 1962.

Dr. Price is a diplomate of the American Board of Preventive Medicine (1950); a fellow of the American Public Health Association; a member of the American Medical Association, the Public Health Cancer Association of America, and the American Association for the Advancement of Science.

Ernest M. Allen, Ph. D.

Dr. Ernest M. Allen came to the National Institutes of Health in January 1946 from the Venereal Diseases Division of the Public Health Service where he had been senior public health representative since 1943. His first NIH appointment was Assistant Chief of the newly established Research Grants Office (later called the Division of Research Grants). In 1951 he became Chief of the Division with focal responsibility for administration and coordination of the PHS grants and awards programs.

Born in Terrell, Tex., on December 1, 1904, Dr. Allen received his Ph. D. magna cum laude from Emory University in 1926. He received his M.A. from Emory in 1939. The degree of doctorate of science was conferred upon him by the same university in 1956 in recognition of his distinguished service to medical research.

In November 1953, Dr. Allen accepted the Lasker Award of the Public Health Service Association for the Division of Research Grants. This award is considered one of the Nation's primary medical honors in recognition, among other things, of distinguished service in the field of public health administration. Other honors awarded to Dr. Allen include Phi Beta Kappa, Phi Sigma Iota, Phi Theta Kappa, Alpha Epsilon Upsilon, and the Yorktown Medal of the French Government.

Dr. Allen has been a member of a number of Federal panels and committees, including the President's Commission on Health Needs of the Nation. In October 1954 he was the U.S. representative at an international conference on the support of medical research held at the Royal Society of Medicine, London, England.

Dr. Allen left the Division of Research Grants in 1960 to become the NIH Associate Director for Research Grants. He is presently Grants Policy Officer in the Office of the Surgeon General, Public Health Service.

Dale R. Lindsay, Ph. D.

Dr. Dale R. Lindsay joined the Public Health Service as a career officer in 1943. His first assignment took him into malaria control in the war areas program. In 1948 he was appointed Chief of the PHS field station in Thomasville, Ga., where he remained until his transfer to the Division of Research Grants in 1953 as Chief of the Program Analysis Section. Two years

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later he became Scientific Director of the Division, a title that was changed in 1957 to Assistant Chief, and in 1960 was appointed Chief.

A native of Bunker Hill, Kans., Dr. Lindsay was born August 9, 1913. He received his Ph. D. in 1943 at Iowa State College where he was a teaching fellow in etomology from 1938 to 1940, a research assistant from 1940 to 1942, and a research associate and instructor from 1942 to 1943.

He is the author or coauthor of many papers in the field of insect vectors, epidemiological studies of enteric infections, and public health, and is a fellow of both the American Association for the Advancement of Science and the American Public Health Association. He is also a member of the Society of Tropical Medicine and Hygiene and the Entomological Society of America, and is on the governing board of the Entomological Society of America, and the Scientific Advisory Board of the Sugar Research Foundation, Inc.

On his retirement from the Public Health Service in June 1963, Dr. Lindsay accepted an appointment at the Massachusetts General Hospital, Boston, as deputy to the general director for research administration.

Eugene A. Confrey, Ph. D.

Dr. Eugene A. Confrey came to the Division of Research Grants in November 1962 as Assistant Chief from the Bureau of State Services where he had been assistant to the Chief of the Office of Research Grants for Community Health. Prior to that he served in the Office of the Surgeon General of the Public Health Service. He has been Chief of the Division of Reseach Grants since October 1963.

Born on April 6, 1922, in Buffalo, N.Y., Dr. Confrey received his Ph. D. from Yale University in 1963.

He has been an instructor in philosophy, logic, and scientific method at George Washington University, and served in the Medical Statistics Division of the Office of the Surgeon General (Army) from 1951–56 as an analytical statistician and technical editor.

Dr. Confrey is the editor of a textbook on public health administration, and has written a number of publications and reports, principally in the fields of gerontology, medical care administration, manpower needs, urban planning of public health services, public health research, and problems of communication in public health.

DIVISION OF RESEARCH SERVICES

MISSION OF THE DIVISION OF RESEARCH SERVICES

The Division of Research Services—

Provides the following centralized services to NIH: Plant engineering, design, construction, maintenance, and plans and negotiations in connection therewith.

Landscaping and care of grounds; environmental sanitation.

Animal production, care, quarantine, and pathology.

Sterile glassware and media preparation.

Biomedical instrumentation and engineering services.

Electronic data processing.

Medical library and translating service.

Medical art and other art and exhibits work.

Photographic services.

IMPORTANT EVENTS IN THE HISTORY OF DRS

1956—The Division of Research Services was established on January 1. Until 1955 most of the basic functions now vested in DRS were performed by several branches of the Office of the Director, NIH. DRS was established to provide equipment, and a wide variety of professional and technical services essential to the needs of NIH medical investigators and research administrators. DRS originally consisted of six branches: Biometrics, Laboratory Aids, Plant Engineering, Research Facilities Planning, Sanitary Engineering, and Scientific Reports.

1958—The "modern" era in computation and data processing at NIH began with the acquisition of an IBM 650 digital computer.

1958—The Special Events Section of the Scientific Reports Branch was transferred to the Clinical Center and the Vehicle Repair Shop was transferred to the Office Services Branch.

1959—The biometrics function of the Biometrics Branch was transferred to NHI with the Statistical Processing Section remaining in the Branch.

1960—NIH acquired 513 acres of farmland near Poolesville on May 6. This land became the site of the NIH Animal Center.

1960—In response to NIH's growing need to apply computer technology to its biomedical research programs, the former Biometrics Branch was abolished and the Statistical Processing Section was reorganized as the Computation and Data Processing Branch.

1960—In response to the increasing demand of NIH investigators for highly sophisticated instruments, an Instrument Engineering and Development Branch was established in DRS, assuming, on an enlarged scale, the instrumentation function originally vested in the Laboratory Aids Branch.

1960—A development program was formed within the Research Facilities Planning Branch, under which short-term research and development engineering studies were conducted to incorporate the latest design concepts in new NIH facilities.

1960—The Editorial Section and Publications and Reports Section were transferred to the Office of Research Information, the Library Section was reorganized as the Library Branch within the Division of Research Services, and the remaining Medical Arts Section and Photographic Section of the Scientific Reports Branch were reorganized as the Medical Arts and Photography Branch. Concurrent with these changes, the Scientific Reports Branch was abolished.

1961—A Minneapolis Honeywell 800 computer was installed late in 1961.

1962—DRS attained its present organization of an Office of the Chief and eight branches: Computation and Data Processing, Environmental Services, Instrument Engineering and Development, Laboratory Aids, Library, Medical Arts and Photography, Plant Engineering, and Research Facilities Planning.

1962—Production of germ-free and pathogen-free animals was started in the Laboratory Aids Branch.

1963—A second Minneapolis Honeywell 800 computer was added to the central computer facility in March.

LEGISLATIVE CHRONOLOGY OF DRS

January 1, 1956—The Surgeon General approved the establishment of the Division of Research Services under the authority of section 301 of the Public Health Service Act as amended (42 U.S.C. 241).

BRIEF BIOGRAPHICAL SKETCH OF THE CHIEF OF THE DIVISION OF RESEARCH SERVICES

Chris A. Hansen, M.S.

Mr. Chris A. Hansen became the first Chief of the Division of Research Services in April 1956. Before coming to NIH he was Assistant Chief (Operations) of the Communicable Disease Center (CDC), Atlanta, Ga., a position he had held since late 1952. During this time he also served as Chief of the Facilities Planning Office, which was charged with the development of six new CDC buildings.

Mr. Hansen joined the U.S. Public Health Service Reserve Corps in 1942 and was assigned to the Headquarters of Malaria Control in War Areas, Atlanta. He remained with this organization (which became the CDC in 1946) until he joined NIH. At CDC he served in various capacities, including Chief of the Engineering Division, Executive Officer, and Assistant Chief.

He graduated from North Dakota State College in 1937 with a B.S. in civil engineering and was awarded his M.S. in sanitary engineering by the University of North Carolina, 1942.

Mr. Hansen was appointed to the Regular Corps of the Public Health Service in June 1946. He is a member of several honorary and professional societies and is a diplomate in the American Academy of Sanitary Engineering.

DRS FIELD STATIONS OR OTHER SPECIAL FACILITIES

Rockville Farm
Rockville, Md.

In October 1948, a Maryland dairyman and contractor offered NIH the temporary use of one or two farms that he owned as a contribution to medical research. An NIH committee chose a 6-acre farm outside of Rockville as most suitable. On June 28, 1949, the Rockville Farm was officially transferred to the Public Health Service. For the next 12 years, it helped

to meet the growing needs of NIH laboratories for a variety of large and small research animals. Following the purchase of farmland near Poolesville, Md., for a new NIH Animal Center, the Rockville Farm was officially vacated by NIH on June 30, 1962.

NIH Animal Center
Poolesville, Md.

In May 1960, NIH purchased 513 acres of farmland lying southwest of Poolesville, Md., near the Potomac River. The original cost of the land was $146,689. To date, much of the activity at the NIH Animal Center has been of a quarantine and temporary holding nature. The initial phase of a large construction program is nearing completion and within the next 4 years most of the animal breeding and quarantine programs at NIH will be transferred to the Animal Center. When in full operation, the Center will employ between 150 and 200 scientific and technical persons, and will be an extension of animal holding and production facilities at Bethesda. Programs of the Institutes will include studies of animal behavior, blood products, and other noninfectious investigations. The animal population at the Center varies as research programs change. However, to give an idea of the kinds of animals at the Center, the population in January 1965 was:

Horses	17
Burros	21
Sheep	130
Goats	46
Cattle	8
Swine	3
Dogs	676
Cats	11

CLINICAL CENTER

MISSION OF THE CLINICAL CENTER

The Clinical Center—

Provides for an integrated operation of its patient facilities, which service those Institutes conducting clinical investigations.

Provides all hospital services, other than physician care, for the medical care, maintenance, and general welfare of patients.

Develops and recommends policies and rules for the protection and welfare of patients.

Conducts research in methods and techniques of hospital care in a medical research environment and serves as a model of study for professional groups in biomedical research and related fields.

Provides general supervision for residency training and related programs of the Center.

Manages the NIH visitor program; and schedules seminars, lectures, and conferences to be held in the auditorium.

Provides cafeteria and housekeeping services for the Clinical Center building.

IMPORTANT EVENTS IN THE HISTORY OF CC

November 1948—Construction of the NIH Clinical Center was started.

June 22, 1951—The cornerstone-laying ceremony was held, with Oscar R. Ewing, Federal Security Administrator, officiating, and President Harry S. Truman as honored guest.

July 2, 1953—The Clinical Center was dedicated by Oveta Culp Hobby, Secretary of the U.S. Department of Health, Education, and Welfare.

July 6, 1953—The first patient was admitted to the Clinical Center.

September 5, 1963—A new surgical wing for cardiac surgery and neurosurgery was dedicated by Luther L. Terry, M.D., Surgeon General of the U.S. Public Health Service.

LEGISLATIVE CHRONOLOGY OF THE CLINICAL CENTER

July 1, 1944—Public Law 410, the Public Health Service Act, authorized establishment of the Clinical Center.

July 8, 1947—Under Public Law 165, research construction provisions of the Appropriations Act for fiscal year 1948 provided funds "For the acquisition of a site, and the preparation of plans, specifications, and drawings, for additional research buildings and a 600-bed clinical research hospital and necessary

accessory buildings related thereto to be used in general medical research. . . ."

BRIEF BIOGRAPHICAL SKETCHES OF THE DIRECTORS OF THE CLINICAL CENTER

John A. Trautman, M.D.

Dr. John A. Trautman served as Director of the Clinical Center from July 1, 1951, to June 24, 1954. Prior to his tenure at the Clinical Center, Dr. Trautman directed the PHS Staten Island facility, a 985-bed general hospital. From 1946 to 1948, he was Chief of the same hospital's Department of Dermatology and Syphilology.

Dr. Trautman entered the Public Health Service in 1939, serving his internship at the Chicago Marine Hospital. Thereafter he was assigned to various PHS facilities where he gained wide experience in hospital administration and clinical investigation.

Upon leaving the Clinical Center in 1954, Dr. Trautman assumed the position of Medical Officer in Charge of the PHS hospital in Fort Worth, Tex. He currently holds the same position at the PHS hospital in New Orleans, La.

Donald W. Patrick, M.D.

Dr. Donald W. Patrick served as Director of the Clinical Center from June 23, 1954, to October 30, 1956. Prior to his appointment as Director of the Clinical Center, Dr. Patrick served as Medical Officer in Charge of PHS hospitals from 1945 to 1954 at Evansville, Ind., Detroit, Mich., and Baltimore, Md.

A native of Denver, Colo., Dr. Patrick received his M.D. from the University of Colorado in 1930. After interning at New Orleans Hospital, he was commissioned in the Public Health Service in 1931. Dr. Patrick joined the NIH staff in 1935, and the following year his NIH assignment took him to the Leprosy Investigations Service at the Kalihi Hospital in Honolulu.

He returned to this country in 1940 and served as Executive Officer at the PHS Staten Island Hospital for 4 years. After leaving the Clinical Center in 1956, Dr. Patrick was Medical Director of the PHS hospital in San Francisco until his retirement on August 1, 1962.

Jack Masur, M.D.

Dr. Jack Masur has served as Director of the Clinical Center since November 1, 1956. In addition to directing this research hospital, Dr. Masur has staff responsibility in the Office of the Director, NIH, as Associate Director for Clinical Care Administration. Since joining the Commissioned Corps of the Public Health Service in 1943, he has held a variety of responsible posts.

Internationally known in the fields of hospital administration and hospital planning and construction, Dr. Masur served as Director of the Clinical Center Project from 1948 to 1951. As Assistant Surgeon General and Chief of the Bureau of Medical Services from 1951–56, he directed the broad medical care program of PHS by administering its USPHS hospitals and other hospital facilities, including Freedmen's Hospital in Washington, D.C.

Before joining PHS, Dr. Masur was executive director of Lebanon Hospital and assistant director of Montefiore Hospital, both in New York City. He is a graduate of New York University and Cornell University Medical School, taking his internship at Bellevue Hospital in New York and his residency in medicine at Montefiore Hospital.

Active in many medical and health organizations, Dr. Masur has held a number of positions in the American Hospital Association, including the presidency in 1961–62. He is also a member of the Joint Commission on Accreditation of Hospitals; a member of the Advisory Committee of the Kellogg Foundation and of the Sloan Institute for Hospital Administration, and has been president of the American Association of Hospital Consultants. Since 1947, Dr. Masur has held a teaching appointment as lecturer in hospital administration at Columbia University. He is a native of Augusta, Ga.

MAJOR PROGRAMS OF CC

Patient Admissions

Especially designed for the medical research activities of the Instiutes, the hospital portion of the Clinical Center can accommodate about 500 carefully selected patients. The Clinical Center is not a diagnostic clinic for rare or unusual diseases, but is concerned primarily with the more common serious chronic disorders. Patients are referred to NIH by their own physician, but are admitted only if theirs is the particular kind or stage of a disease or other condition required for an Institute research project. There is no charge for nursing and medical care received by patients who are under study; however, transportation costs to and from the Clinical Center cannot be paid by NIH.

Normal Volunteer Patient Program

In this program, begun in 1954, healthy men and women, of all ages and from diverse backgrounds, volunteer to serve as normal control subjects in medical research studies at NIH. As an integral part of the research team, the volunteers participate in varied studies and tests, providing scientists with an index of normal body function against which to measure the abnormal. Volunteers are recruited through the cooperation of sponsoring agencies, such as churches, colleges, and civic organizations. Currently, normal volunteers constitute approximately 15 percent of the 4,000 patients admitted annually to the Clincil Center.

Patient Activities

A comprehensive recreation program is conducted at the Clinical Center to make the often lengthy stay of patients as pleasant as possible. Available to patients are such resources as a well-stocked library; a wide variety of organized recreational activities; and a regular schedule of religious services in a chapel equipped with revolving altar for different faiths. A closed-circuit radio system broadcasts special programs, including chapel services, to the rooms of bedfast patients. Through cooperative arrangements with church, service, and civic groups in the community, the Patient Activities Staff provides many special services such as English-language instruction for foreign-born patients and training in braille for the blind.

Conferences

From September to June each year, the Education Committee of the Clinical Center Medical Board sponsors a series of Combined Clinical Staff Conferences, and a similar schedule of general Medical Grand Rounds. The Clinical Staff Conferences are presented by the Institutes, in turn, and each features the review of a current study of general interest. These conferences are usually open only to medical personnel and members of allied services at NIH. However, two evening meetings per year are scheduled to include representatives from the Washington-Baltimore area medical and dental schools, the District of Columbia, Virginia, and Montgomery County Medical Societies, administrators of metropolitan area hospitals, Clinical Center medical care consultants, and interested physicians in private practice. The proceedings of at least six of these conferences each year are published in the *Annals of Internal Medicine.*

Normal Volunteers Admitted to the Clinical Center

Year	Number	Year	Number
1954	17	1960	274
1955	53	1961	501
1956	68	1962	477
1957	81	1963	582
1958	85	1964	553
1959	100		
		Total	2, 791

Source: Information Office, Clinical Center, NIH.

Clinical Center Admissions by Institute

Year	NCI	NHI	NIAID	NIAMD	NIDR	NIMH	NINDB	Yearly total
1954	323	382	259	129	0	51	308	1, 452
1955	455	481	246	250	6	73	358	1, 889
1956	585	615	281	295	40	110	483	2, 409
1957	769	788	330	317	26	140	524	2, 894
1958	891	889	422	325	47	154	572	3, 300
1959	878	1, 056	364	376	42	86	650	3, 452
1960	881	1, 065	381	446	39	127	729	3, 668
1961	940	1, 015	450	490	38	200	743	3, 876
1962	1, 068	1, 086	423	527	65	204	778	4, 151
1963	951	1, 018	433	514	53	239	652	3, 860
1964	1, 172	1, 077	391	497	55	233	628	4, 053
Total	8, 913	9, 472	3, 980	4, 166	411	1, 637	6, 425	35, 004

Source: Information Office, Clinical Center, NIH.

Clinical Center Bed Complement Increase, on a Semiannual Basis

Date	NCI	NHI	NIDR	NIAMD	NIAID	NIMH	NINDB	Total
December 1953	26	26	.....	26	26	31	26	161
June 1954	52	52	.....	39	26	44	37	250
December 1954	76	62	.....	48	36	58	52	332
June 1955	89	72	.....	48	39	58	67	373
December 1955	91	72	2	52	39	73	67	396
June 1956	104	76	5	55	52	73	78	443
December 1956	104	102	5	55	52	73	78	469
June 1957	139	102	5	61	52	73	78	510
July 3, 1957	139	102	5	61	52	79	78	516

The 516 total bed capacity has remained to date. Reallotment of beds between NCI and NIAMD was made, with the present bed complement assignment as follows:

	130	102	5	70	52	79	78	516

Source: Information Office, Clinical Center, NIH.

Part III

NIH APPROPRIATIONS

Total NIH Appropriations and Amounts Appropriated for Grants and Direct Operations, Fiscal Years 1938–65

Fiscal year	Total grants [1]	Direct operations	Total appropriation
1938.....	$140,000	$324,000	$464,000
1939.....	171,000	293,000	464,000
1940.....	277,240	429,760	707,000
1941.....	236,650	474,350	711,000
1942.....	229,800	470,200	700,000
1943.....	180,800	1,097,470	1,278,270
1944.....	182,190	2,372,830	2,555,020
1945.....	170,606	2,664,394	2,835,000
1946.....	1,080,200	2,334,500	3,414,700
1947.....	3,964,248	4,111,200	8,075,448
1948.....	10,445,000	18,431,000	28,876,000
1949.....	23,835,000	13,833,000	37,668,000
1950.....	36,753,631	18,338,369	55,092,000
1951.....	43,508,876	16,550,874	60,059,750
1952.....	40,545,000	17,130,291	57,675,291
1953.....	39,132,000	19,898,750	59,030,750
1954.....	48,612,000	22,541,000	71,153,000
1955.....	54,331,000	26,937,000	81,268,000
1956.....	63,265,000	35,193,000	98,458,000
1957.....	133,429,000	49,578,000	183,007,000
1958.....	147,376,000	63,807,000	211,183,000
1959.....	212,539,000	81,844,000	294,383,000
1960.....	304,430,000	95,570,000	400,000,000
1961.....	453,278,000	106,722,000	560,000,000
1962.....	599,998,000	138,337,000	738,335,000
1963.....	714,782,000	166,018,000	880,800,000
1964.....	758,569,000	159,885,000	918,454,000
1965.....	782,199,000	183,793,000	[2] 1,058,992,000

[1] Includes grants for research, fellowships, training, State control programs, community demonstration projects, etc.

[2] Includes construction grants totaling $93 million.

Source: Financial Management Branch, Office of the Director, NIH.

Total Institute Appropriations, Fiscal Years 1938–65

[Thousands of dollars]

Fiscal year	GRS–NIH [1]	DBS	NICHD	NCI	NIMH	NHI	NIDR	NIAMD	NIAID	NINDB	Total appropriation
1938	64			400							464
1939	64			400							464
1940	137			570							707
1941	141			570							711
1942	135			565							700
1943	743			535							1, 278
1944	2, 025			530							2, 555
1945	2, 274			561							2, 835
1946	2, 866			549							3, 415
1947	6, 255			1, 821							8, 075
1948	10, 126			14, 500	4, 250						28, 876
1949	14, 540			14, 000	9, 128						37, 668
1950	12, 075			18, 900	11, 612	10, 725	1, 780				55, 092
1951	14, 314			20, 086	9, 505	14, 200	1, 955				60, 060
1952	15, 757			19, 657	10, 562	10, 083	1, 618				57, 675
1953	16, 599			17, 887	10, 895	12, 000	1, 650				59, 031
1954	4, 675			20, 237	12, 095	15, 168	1, 740	7, 000	5, 738	4, 500	71, 153
1955	4, 675			21, 737	14, 148	16, 668	1, 990	8, 270	6, 180	7, 601	81, 268
1956	5, 929			24, 978	18, 001	18, 898	2, 176	10, 840	7, 775	9, 861	98, 458
1957	12, 122			48, 432	35, 197	33, 396	6, 026	15, 885	13, 299	18, 650	183, 007
1958	14, 026			56, 402	39, 217	35, 936	6, 430	20, 385	17, 400	21, 387	211, 183
1959	28, 974			75, 268	52, 419	45, 613	7, 420	31, 215	24, 071	29, 403	294, 383
1960	45, 994			91, 257	68, 090	62, 237	10, 019	46, 862	34, 054	41, 487	400, 000
1961	83, 900			111, 000	100, 900	86, 900	15, 500	61, 200	44, 000	56, 600	560, 000
1962	127, 637			142, 836	108, 876	132, 912	17, 340	81, 831	56, 091	70, 812	738, 335
1963	159, 826			155, 742	143, 599	147, 398	21, 199	103, 388	66, 142	83, 506	880, 800
1964	154, 223	4, 787	[2] 34, 000	143, 194	176, 374	127, 423	19, 166	107, 699	67, 117	84, 471	918, 454
1965	164, 759	4, 969	42, 696	150, 011	187, 932	124, 824	20, 083	113, 050	69, 847	87, 821	[3] 1, 058, 992

[1] General Research and Services appropriation. (Includes NIGMS.)

[2] Derived by transfers from other NIH appropriations authorized by Congress.

[3] Includes construction grants totaling $93 million.

Source: Financial Management Branch, Office of the Director, NIH.

Research Grant Appropriations by Funding Institute, Fiscal Years 1946–65

[Amounts in thousands of dollars]

Fiscal year	NIAID	NIAMD	NCI	NIDR	GMS [1]	NHI	NIMH	NINDB	NICHD	Total
1946	.....	.....	77	.....	703	.....	.....	.....	.....	780
1947	.....	.....	515	.....	2, 922	.....	.....	.....	.....	3, 437
1948	.....	.....	2, 600	.....	5, 901	.....	374	.....	.....	[2] 8, 874
1949	.....	.....	3, 300	([3])	7, 025	([3])	546	.....	.....	10, 871
1950	.....	.....	2, 600	200	5, 570	3, 902	794	.....	.....	13, 066
1951	([3])	([3])	3, 170	221	7, 501	4, 730	1, 152	([3])	.....	16, 774
1952	.....	.....	3, 100	221	8, 615	4, 824	1, 413	.....	.....	18, 173
1953	.....	.....	4, 920	221	8, 515	5, 133	1, 585	.....	.....	20, 374
1954	1, 950	3, 196	7, 369	221	4, 000	6, 843	2, 587	2, 700	.....	28, 866
1955	2, 110	3, 990	8, 160	421	4, 000	7, 750	3, 587	3, 900		33, 918
1956	2, 110	4, 810	9, 110	421	5, 000	8, 550	3, 937	4, 350	.....	38, 288
1957	8, 065	8, 140	22, 847	2, 700	7, 954	18, 895	11, 426	9, 630	.....	[4] 89, 657
1958	10, 824	11, 037	21, 059	2, 825	9, 468	19, 364	12, 402	10, 750	.....	97, 729
1959	14, 438	18, 649	27, 814	3, 627	16, 621	24, 616	18, 834	16, 855	.....	141, 454
1960	21, 593	31, 818	37, 068	4, 476	23, 559	36, 468	23, 482	24, 484	.....	202, 948
1961	28, 951	41, 712	53, 728	6, 363	42, 143	55, 570	39, 874	38, 437	.....	306, 778
1962	36, 800	58, 009	68, 700	8, 073	79, 247	91, 928	46, 445	44, 460	.....	433, 662
1963	39, 156	73, 050	63, 288	10, 042	101, 421	98, 514	56, 162	51, 232	.....	492, 805
1964	40, 125	81, 475	64, 479	9, 713	105, 724	95, 963	73, 947	57, 805	.....	529, 231
1965	40, 073	79, 236	62, 340	9, 296	104, 415	87, 112	75, 683	56, 236	30, 762	545, 153

[1] No separate appropriation for General Medical Sciences. Funded from General Research and Services appropriation.

[2] Total deviates because of rounding.

[3] Operations funded through general medicine by allocation from general research and services appropriation.

[4] Excludes, $25,000 transferred to fellowship program.

Source: Statistics and Analysis Branch, Division of Research Grants, NIH.

Training Program Appropriations by Funding Institute or Division, Fiscal Years 1946–65

[Amounts in thousands of dollars]

Fiscal year	NIAID	NIAMD	NCI	NICHD	NIDR	GMS [1]	NHI	NIMH	NINDB	Total
1946	.....	.....	25	.....	.....	.....	.....	.....	.....	25
1947	.....	.....	250	.....	.....	.....	.....	.....	.....	250
1948	.....	.....	1, 750	.....	.....	.....	.....	1, 060	.....	2, 810
1949	.....	.....	2, 500	.....	.....	.....	.....	1, 430	.....	3, 930
1950	.....	.....	2, 625	.....	.....	.....	834	2, 956	.....	6, 415
1951	.....	.....	2, 415	.....	.....	.....	888	3, 349	.....	6, 652
1952	.....	.....	2, 415	.....	.....	86	891	4, 000	.....	7, 392
1953	.....	.....	2, 725	.....	.....	86	1, 623	3, 750	.....	8, 184
1954	.....	250	2, 855	.....	.....	.....	3, 028	4, 176	504	10, 813
1955	.....	250	2, 725	.....	.....	.....	2, 762	4, 310	1, 004	11, 051
1956	.....	950	2, 725	.....	.....	.....	3, 142	5, 885	1, 800	14, 502
1957	.....	1, 850	4, 675	.....	500	500	4, 400	12, 000	4, 150	28, 075
1958	650	2, 450	4, 725	.....	500	500	5, 135	14, 000	4, 972	32, 932
1959	1, 787	4, 435	6, 050	.....	450	6, 040	7, 152	18, 213	5, 775	49, 902
1960	3, 621	6, 298	6, 855	.....	1, 100	13, 038	8, 676	26, 197	8, 888	74, 673
1961	4, 790	8, 300	7, 055	.....	2, 965	27, 000	11, 970	39, 470	8, 450	110, 000
1962	5, 400	10, 300	9, 055	.....	4, 791	31, 000	13, 104	34, 856	10, 000	118, 506
1963	7, 200	13, 034	13, 470	.....	5, 853	35, 442	16, 000	49, 373	13, 767	154, 139
1964	7, 992	14, 420	12, 520	.....	4, 805	37, 256	15, 179	66, 048	14, 382	172, 602
1965	8, 239	13, 690	9, 000	2, 600	4, 708	37, 182	14, 984	73, 213	14, 751	181, 311

[1] No separate appropriation for General Medical Sciences. Funded from General Research and Services appropriation.

Source: Statistics and Analysis Branch, Division of Research Grants, NIH.

Fellowship Award Appropriations by Funding Institute or Division, Fiscal Years 1946–65

[Amounts in thousands of dollars]

Fiscal year	NIAID	NIAMD	NCI	NICHD	NIDR	GMS [1]	NHI	NIMH	NINDB	Total
1946	.....	.....	26	.....	.....	19	.....	.....	.....	45
1947	.....	.....	78	.....	.....	100	.....	.....	.....	178
1948	.....	.....	300	.....	.....	150	.....	70	.....	520
1949	.....	.....	500	.....	.....	515	.....	100	.....	1,115
1950	.....	.....	500	.....	35	515	298	100	.....	1,448
1951	.....	.....	500	.....	50	515	300	200	.....	1,565
1952	.....	.....	500	.....	50	649	300	256	.....	1,755
1953	.....	.....	625	.....	50	649	450	250	.....	2,024
1954	117	175	750	.....	50	124	580	187	150	2,133
1955	117	150	861	.....	100	124	873	187	150	2,562
1956	117	150	861	.....	100	249	873	300	150	2,800
1957	117	300	1,000	.....	500	[2] 1,023	1,335	647	500	5,422
1958	117	350	1,200	.....	500	1,498	1,600	647	528	6,440
1959	866	337	1,427	.....	423	3,260	2,163	1,396	536	10,408
1960	1,066	437	2,400	.....	650	5,310	2,663	1,996	536	14,570
1961	1,400	870	2,400	.....	760	10,100	3,100	2,390	980	22,000
1962	1,700	1,500	3,100	.....	1,120	11,290	4,150	4,440	1,780	29,080
1963	2,900	3,927	4,788	.....	1,630	14,480	5,950	5,940	2,023	41,638
1964	3,058	4,019	5,188	.....	1,257	15,277	6,399	8,534	2,054	45,786
1965	2,976	4,979	3,942	2,600	1,299	16,765	6,207	8,057	2,160	48,985

[1] No separate appropriation for General Medical Sciences. Funded from General Research and Services appropriation.
[2] Includes $25,000 transferred from research project funds.

Traineeship Award Appropriations by Funding Institute, Fiscal Years 1946–58 [1]

[Amounts in thousands of dollars]

Fiscal year	NIAMD	NCI	GMS [2]	NHI	NINDB	Total
1946	.....	25	.....	.....	.....	25
1947	.....	250	.....	.....	.....	250
1948	.....	250	.....	.....	.....	250
1949	.....	250	.....	.....	.....	250
1950	.....	375	.....	166	.....	541
1951	.....	375	.....	150	.....	525
1952	.....	375	86	150	.....	611
1953	.....	500	86	250	.....	836
1954	250	500	.....	400	104	1,254
1955	250	500	.....	400	104	1,254
1956	.....	500	.....	.....	.....	500
1957	.....	730	.....	.....	.....	730
1958	.....	800	.....	.....	.....	800

[1] Subsequent years included in appropriations for training grants.
[2] No separate appropriation for General Medical Sciences. Funded from General Research and Services appropriation.

Source: Statistics and Analysis Branch, Division of Research Grants, NIH.

Health Research Facilities Construction Appropriations, Fiscal Years 1957–65

Fiscal year	Appropriation	Fiscal year	Appropriation
1957 Supp.	$30,000,000	1962	$30,000,000
1958	30,000,000	1963	50,000,000
1959	30,000,000	1964	50,000,000
1960	30,000,000	1965	58,000,000
1961	30,000,000		

Source: Financial Management Branch, Office of the Director, NIH.

Part IV

SUPPORT OF MEDICAL RESEARCH

U.S. Medical Research and Development Expenditures as a Proportion of Total U.S. Research and Development, Fiscal Years 1950–63

Fiscal year	Total U.S. research and development	U.S. medical research and development [1]	Medical research and development as a percent of total R.&D. (percent)
	Millions of dollars		
1950	2,900	161	5.6
1951	3,400	175	5.1
1952	3,800	197	5.2
1953	5,150	214	4.2
1954	5,620	237	4.2
1955	6,390	261	4.1
1956	8,670	312	3.6
1957	10,100	440	4.4
1958	11,130	543	4.9
1959	12,680	648	5.1
1960	13,890	845	6.1
1961	14,740	1,045	7.1
1962	16,000	1,290	8.1
1963 estimate	18,500	1,470	7.9

[1] Includes research training and construction.

Sources: Total R.&D. expenditures (1950–52)—Department of Defense; 1953–62—National Science Foundation; 1963—Resources Analysis Branch, OPP, National Institutes of Health. Medical R.&D. expenditures—National Institutes of Health.

Federal Medical Research Expenditures as a Proportion of Total U.S. Medical Research Expenditures, Fiscal Years 1947–64 [1]

Fiscal year	Total U.S. medical research	Total Federal medical research	Total non-Federal medical research	Federal as a percent of total U.S. medical research (percent)
	Millions of dollars			
1947	87	27	60	31.0
1948	124	50	74	40.3
1949	147	65	82	44.2
1950	161	73	88	45.3
1951	175	85	90	48.6
1952	197	103	94	52.2
1953	214	107	107	50.0
1954	237	119	118	50.2
1955	261	139	122	53.3
1956	312	162	150	51.9
1957	440	229	211	52.0
1958	543	279	264	51.4
1959	648	351	297	54.2
1960	845	448	397	53.0
1961	1,045	574	471	54.9
1962	1,290	782	508	60.6
1963	1,470	924	546	62.9
1964	1,675	1,084	591	64.7

[1] Excludes expenditures for activities such as training or capital outlays for research facilities.

Source: Resources Analysis Branch, OPP, National Institutes of Health.

Federal Medical Research and Development Expenditures as a Proportion of Total Federal Research and Development Expenditures, Fiscal Years 1947–63

Fiscal year	Total Federal R. & D. (Including national defense and space exploration)	Total Federal medical R. & D.[1]	Medical R. & D. as a percent of total Federal R. & D. (percent)
	Millions of dollars		
1947	690.9	27.1	3.9
1948	867.6	56.1	6.5
1949	1,105.1	83.5	7.6
1950	1,175.3	108.7	9.2
1951	1,811.9	105.1	5.8
1952	2,194.4	126.0	5.7
1953	3,361.4	120.5	3.6
1954	3,038.8	131.1	4.3
1955	2,746.9	143.4	5.2
1956	3,268.8	171.4	5.2
1957	4,381.3	266.7	6.1
1958	4,908.3	317.5	6.5
1959	7,120.7	407.3	5.7
1960	8,078.0	496.3	6.1
1961	9,606.3	627.7	6.5
1962	11,238.5	838.2	7.5
1963	14,612.9	1,005.8	6.9

[1] Includes expenditures for research facilities.

Source: National Science Foundation and Resources Analysis Branch, OPP, National Institutes of Health.

NIH Expenditures for Medical Research as a Proportion of Total Federal Expenditures for Medical Research, Fiscal Years 1947–64 [1]

Fiscal year	Total Federal medical research expenditures	Total NIH medical research expenditures	NIH expenditures as a percent of Federal expenditures (percent)
	Thousands of dollars		
1947	26,990	8,337	30.9
1948	49,681	16,958	34.1
1949	65,120	24,512	37.6
1950	72,874	27,694	38.0
1951	84,616	30,838	36.4
1952	103,390	34,814	33.7
1953	107,339	37,544	35.0
1954	118,982	49,404	41.5
1955	138,887	60,058	43.2
1956	162,018	72,760	44.9
1957	228,900	125,374	54.8
1958	279,151	160,247	57.4
1959	351,206	211,558	60.2
1960	448,169	280,628	62.6
1961	573,881	375,421	65.4
1962	782,092	495,391	63.3
1963	919,800	566,000	61.7
1964 estimate	1,084,300	661,800	61.0

[1] Excludes expenditures for activities such as training or capital outlays for research facilities.

Source: Resources Analysis Branch, OPP, National Institutes of Health.

Number and Amount of Research Grants Awarded by Institutes, Fiscal Years 1938–64

[Amounts in thousands of dollars]

Fiscal year	NIAMD		NIAID [6]		NCI		NIDR		GMS [3]	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
1938	.....	.....	.....	.....	9	91	.....	.....	.....	.....
1939	.....	.....	.....	.....	10	68	.....	.....	.....	.....
1940	.....	.....	.....	.....	13	61	.....	.....	.....	.....
1941	.....	.....	.....	.....	12	78	.....	.....	.....	.....
1942	.....	.....	.....	.....	12	78	.....	.....	.....	.....
1943	.....	.....	.....	.....	9	49	.....	.....	.....	.....
1944	.....	.....	.....	.....	5	53	.....	.....	.....	.....
1945	.....	.....	.....	.....	9	85	.....	.....	.....	.....
1946	.....	.....	.....	.....	13	77	.....	.....	51	559
1947	.....	.....	.....	.....	51	470	.....	.....	177	1, 668
1948	.....	.....	.....	.....	343	4, 208	24	[1] 111	412	3, 543
1949	.....	.....	.....	.....	389	4, 557	30	[1] 165	459	3, 802
1950	.....	.....	.....	.....	316	2, 708	34	200	476	3, 424
1951	46	[1] 705	152	[1] 1, 435	335	3, 389	38	226	569	5, 364
1952	130	[1] 1, 376	220	[1] 2, 018	320	3, 161	36	232	494	4, 352
1953	143	[1] 1, 435	233	[1] 2, 085	481	5, 066	30	230	528	4, 309
1954	359	3, 272	217	2, 062	670	7, 552	27	228	497	4, 278
1955	432	4, 149	236	2, 270	720	8, 500	49	431	470	4, 224
1956	469	4, 970	230	2, 282	779	9, 678	52	429	482	5, 186
1957	772	8, 222	774	8, 115	1, 165	18, 790	274	2, 692	653	7, 992
1958	961	11, 189	906	10, 822	1, 301	22, 040	292	2, 827	754	9, 613
1959	1, 406	18, 829	1, 150	14, 530	1, 635	29, 742	340	3, 484	1, 155	16, 859
1960	2, 083	[2] 30, 720	1, 508	[2] 21, 057	1, 793	[2] 34, 379	372	4, 508	1, 361	26, 018
1961	2, 399	38, 989	1, 945	29, 144	1, 806	43, 158	426	5, 535	1, 825	42, 659
1962	2, 754	53, 075	1, 803	33, 965	1, 914	47, 501	411	6, 580	2, 127	64, 905
1963	2, 845	62, 021	1, 705	36, 225	1, 792	54, 530	457	8, 831	2, 202	52, 119
1964	2, 804	68, 600	1, 471	35, 100	1, 650	55, 700	385	8, 100	1, 951	50, 800

See footnotes on next page, at end of table.

Number and Amount of Research Grants Awarded by Institutes, Fiscal Years 1938–64—Continued

Fiscal year	NHI		NIMH		NINDB		NICHD	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount
1938	.....	.....	.....	.....	.....	.....	.....	.....
1939	.....	.....	.....	.....	.....	.....	.....	.....
1940	.....	.....	.....	.....	.....	.....	.....	.....
1941	.....	.....	.....	.....	.....	.....	.....	.....
1942	.....	.....	.....	.....	.....	.....	.....	.....
1943	.....	.....	.....	.....	.....	.....	.....	.....
1944	.....	.....	.....	.....	.....	.....	.....	.....
1945	.....	.....	.....	.....	.....	.....	.....	.....
1946	.....	.....	.....	.....	.....	.....	.....	.....
1947	.....	.....	.....	.....	.....	.....	.....	.....
1948	.....	.....	25	254	.....	.....	.....	.....
1949	128	[1] 1, 487	43	504	.....	.....	.....	.....
1950	388	4, 000	75	805	.....	.....	.....	.....
1951	403	4, 463	102	1, 057	50	[5] 491	.....	.....
1952	378	5, 011	103	1, 379	117	[1] 1, 048	.....	.....
1953	438	5, 279	110	1, 493	121	[1] 1, 039	.....	.....
1954	605	7, 120	180	2, 612	300	2, 826	.....	.....
1955	726	8, 017	223	3, 642	400	3, 929	.....	.....
1956	756	8, 974	231	3, 340	431	4, 551	.....	.....
1957	1, 390	18, 344	484	7, 406	674	9, 345	.....	.....
1958	1, 357	19, 699	672	12, 445	785	10, 845	.....	.....
1959	1, 571	25, 070	900	17, 093	1, 009	17, 022	.....	.....
1960	2, 064	[2] 35, 947	1, 182	[4] 22, 809	1, 209	23, 281	.....	.....
1961	2, 339	52, 491	1, 426	30, 491	1, 368	30, 474	.....	.....
1962	2, 603	69, 398	1, 712	40, 320	1, 498	36, 354	.....	.....
1963	2, 433	70, 961	1, 841	49, 688	1, 615	43, 143	.....	.....
1964	2, 326	76, 700	1, 751	58, 900	1, 639	48, 500	808	21, 600

[1] Funded from NIH operating expenses.

[2] Excludes $500,000 for metabolic research center grants funded to DGMS.

[3] No separate appropriation for General Medical Sciences. Funded from General Research and Services appropriation.

[4] Excludes $492,887 for metabolic research center grants funded by DGMS.

[5] Funded from NIH operating expenses and NIMH.

[6] National Microbiological Institute until fiscal year 1956.

Source: Statistics and Analysis Branch, Division of Research Grants, NIH.

Number and Amount of Research Grants by Types of Grantee Institutions, Fiscal Years 1953–63

Type of institution	Fiscal year 1953		Fiscal year 1954	
	Number	Amount	Number	Amount
Universities	1, 808	$17, 027, 369	2, 291	$22, 436, 069
Hospitals	258	3, 242, 778	389	4, 829, 022
Government health departments (National, State, and local)	11	240, 907	11	281, 671
Other Government departments (National, State, and local)	6	37, 581	6	70, 008
Private, nonprofit organizations	67	769, 260	92	1, 123, 753
Industry	1	4, 995	.....	.....
Individual	1	5, 200	3	10, 500
Total	2, 152	21, 328, 090	2, 792	28, 751, 023

Type of institution	Fiscal year 1955		Fiscal year 1956	
	Number	Amount	Number	Amount
Universities	2, 623	$26, 490, 132	2, 790	$30, 948, 434
Hospitals	418	5, 473, 908	440	6, 509, 547
Government health departments (National, State, and local)	12	225, 352	12	176, 075
Other Government departments (National, State, and local)	6	69, 654	5	74, 587
Private, nonprofit organizations	113	1, 570, 992	155	2, 606, 181
Industry	2	26, 337	2	26, 371
Individual	1	2, 500	2	24, 400
Total	3, 175	33, 858, 875	3, 406	40, 365, 595

Type of institution	Fiscal year 1957		Fiscal year 1958	
	Number	Amount	Number	Amount
Universities	4, 925	$59, 529, 666	9, 395	$118, 968, 068
Hospitals	806	13, 394, 774	1, 391	24, 215, 051
Government health departments (National, State, and local)	37	535, 392	77	1, 593, 451
Other Government departments (National, State, and local)	14	165, 434	113	2, 508, 938
Private, nonprofit organizations	298	6, 306, 251	764	13, 174, 271
Industry	4	52, 951	60	1, 690, 402
Individual	17	96, 619	19	254, 724
Total	6, 101	80, 081, 087	11, 819	162, 404, 905

Number and Amount of Research Grants by Types of Grantee Institutions, Fiscal Years, 1953–63—Continued

Type of institution	Fiscal year 1959		Fiscal year 1960	
	Number	Amount	Number	Amount
Universities	6, 966	$100, 958, 525	7, 772	$122, 248, 927
Hospitals	1, 096	21, 878, 364	1, 273	25, 498, 081
Government health departments (National, State, and local)	89	2, 441, 716	101	2, 477, 767
Other Government departments (National, State, and local)	37	512, 441	41	713, 422
Private, nonprofit organizations	463	8, 352, 597	508	12, 620, 367
Industry	22	554, 276	24	516, 429
Individual	21	164, 146	16	118, 324
Total	8, 694	134, 862, 065	9, 735	164, 193, 317

Type of institution	Fiscal year 1961		Fiscal year 1962	
	Number	Amount	Number	Amount
Universities	10, 232	$201, 096, 170	11, 076	$252, 547, 843
Hospitals	1, 689	42, 097, 523	1, 805	45, 522, 752
Government health departments (National, State, and local)	176	4, 705, 617	144	3, 783, 163
Other Government departments (National, State, and local)	65	1, 017, 938	63	1, 677, 457
Private, nonprofit organizations	672	18, 078, 894	776	25, 249, 228
Industry	34	890, 371	48	3, 858, 357
Individual	21	228, 060	50	1, 073, 809
Total	12, 889	268, 114, 573	13, 962	333, 712, 609

Type of institution	Fiscal year 1963	
	Number	Amount
Universities	11, 200	$299, 455, 840
Hospitals	1, 733	58, 872, 401
Government health departments (National, State, and local)	157	6, 239, 536
Other Government departments (National, State, and local)	64	1, 951, 033
Private, nonprofit organizations	772	31, 745, 568
Industry	80	13, 822, 933
Individual	27	317, 062
Total	14, 033	412, 404, 373

Source: Bio-Sciences Information Exchange, Washington, D.C.

Research Contracts Executed by Funding Institute or Division,[1] Fiscal Years 1961–64

[Amounts in millions of dollars]

Institute or division	Fiscal year 1961		Fiscal year 1962		Fiscal year 1963		Fiscal year 1964	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount
NHI	5	0.06	7	0.4	7	0.2	20	0.8
NCI	191	23.5	107	24.3	266	26.3	316	30.3
NIAID	2	.3	11	1.2	46	4.0	43	4.2
NIAMD	7	.06	6	.1	7	.3	6	.3
NIDR	.....	.....	.....	.....	2	.3	16	.5
NIGMS	.....	.....	2	.2	4	2.3	16	1.5
NIMH	18	.8	67	1.2	109	2.3	109	2.4
NINDB	7	.3	13	.3	29	.6	31	1.0
DBS	.....	.....	.....	.....	.....	.2	.....	.1
NICHD	.....	.....	.....	.....	.....	.....	6	.1

[1] Awarded from direct operations funds.

Source: Office of Program Planning, Office of the Director, NIH.

Research Project Grants Awarded to Foreign Institutions and International Organizations

	Year of first award	Cumulative awards through June 30, 1964	
		Number	Amount
Grand total	.....	4, 114	$64, 152, 830
Total, excluding international organizations	.....	3, 914	56, 182, 271
Western Hemisphere, total	.....	1, 035	16, 507, 282
Bermuda	1949	1	125
Canada	1949	544	8, 925, 739
Latin America, total	.....	490	7, 581, 418
Argentina	1950	94	1, 167, 925
Brazil	1948	84	943, 743
Chile	1958	57	523, 638
Colombia	1957	18	235, 830
Costa Rica	1961	5	51, 407
Ecuador	1963	2	27, 970
El Salvador	1961	7	130, 012
Guatemala	1960	3	21, 975
Jamaica	1959	9	103, 049
Mexico	1949	84	1, 122, 392
Panama	1957	27	832, 036
Peru	1951	66	1, 687, 028
Uruguay	1961	23	395, 664
Venezuela	1962	11	338, 749
Europe, total	.....	1, 724	24, 765, 583
Austria	1961	35	221, 876
Belgium	1950	79	895, 786
Denmark	1948	134	1, 164, 426
Finland	1953	86	838, 948
France	1948	212	3, 241, 745
Germany, Federal Republic of	1951	51	401, 650
Greece	1959	15	137, 356
Iceland	1961	7	101, 652
Ireland	1958	31	263, 852
Italy	1957	148	1, 778, 550
Netherlands	1958	61	642, 559
Norway	1948	61	742, 977
Portugal	1960	7	91, 124
Spain	1961	10	91, 260
Sweden	1951	309	5, 965, 068
Switzerland	1951	56	605, 819
United Kingdom	1948	411	7, 459, 435
Yugoslavia	1960	11	121, 500

Research Project Grants Awarded to Foreign Institutions and International Organizations—Continued

	Year of first award	Cumulative awards through June 30, 1964	
		Number	Amount
Africa, total		111	$2,189,084
Congo, Republic of	1960	4	65,786
Kenya	1962	3	41,718
Liberia	1956	20	542,409
Nigeria	1962	12	260,850
Senegal	1960	2	59,800
South Africa, Republic of	1953	65	1,109,491
Tanganyika	1960	4	103,090
Uganda	1963	1	5,940
Middle East, total		430	5,789,487
Israel	1948	346	4,792,971
Jordan	1962	3	109,713
Lebanon	1951	79	863,253
Turkey	1961	2	23,550
South Asia and Far East, total		614	6,930,835
Australia	1947	111	1,862,049
Hong Kong	1959	8	87,555
India	1955	32	260,131
Iran	1964	1	3,270
Japan	1956	367	3,904,076
Korea	1959	12	101,116
Malaysia	1962	6	71,946
New Zealand	1958	28	226,835
Pakistan	1961	2	33,900
Philippines	1949	24	189,088
Taiwan	1953	6	74,500
Thailand	1960	17	116,362
International organizations, total		200	7,970,559
International intergovernmental organizations, total		103	5,528,709
World Health Organization	1957	13	1,549,800
Pan American Health Organization	1947	44	2,181,088
Institute of Nutrition of Central America and Panama	1956	46	1,797,821
International professional (research), total		72	1,977,607
Excerpta Medica Foundation	1957	33	731,513
Federation Dentaire Internationale	1957	4	35,081
International Union Against Cancer	1954	18	266,659
World Federation of Neurology	1956	11	828,954
International Brain Research Organization	1962	6	115,400
International professional (meetings), total		25	464,243

Part V

THE NIH STAFF

Number and Types of Personnel at the Hygienic Laboratory (1909–29)

Year	Commissioned	Professors	Other scientific and technicians	Nonscientific	Total
1909	9	3	13	28	53
1910	11	2	12	28	53
1911	13	3	12	27	55
1912	12	3	12	29	56
1913	17	3	11	32	63
1914	22	3	11	35	71
1915	14	3	13	34	64
1916	13	3	22	31	69
1917	16	3	23	36	78
1918	13	3	39	37	92
1919	13	3	38	42	96
1920	13	3	37	50	103
1921	10	3	39	75	127
1922	17	3	45	65	130
1923	10	3	52	56	121
1924	11	3	51	48	113
1925	14	3	49	50	116
1926	13	3	47	51	114
1927	15	3	43	53	114
1928	13	3	45	57	118
1929	12	3	51	62	128

Source: Victor H. Kramer, *The National Institute of Health: A Study in Public Administration* (New Haven, Conn.: Quinnipiack Press, Inc., 1937), p. 82.

Total NIH Employment (1930–64)

Year	Number of employees	Year	Number of employees
1930	140	1948	2,245
1931	150	1949	2,937
1932	165	1950	2,888
1933	139	1951	3,012
1934	160	1952	3,277
1935	159	1953	3,888
1936	183	1954	4,621
1937	695	1955	5,412
1938	912	1956	6,334
1939	1,048	1957	7,215
1940	1,137	1958	7,676
1941	1,367	1959	8,484
1942	1,456	1960	9,109
1943	1,352	1961	10,175
1944	1,144	1962	11,037
1945	1,090	1963	11,511
1946	1,436	1964[1]	11,822
1947	1,505		

[1] As of September 1.

Source: Personnel Management Branch, Office of the Director, NIH.

NIH Employees by Institute (1951–64)

Institute	1951	1952	1953	1954	1955	1956
OD	685	736	991	1,406	1,532	[1] 669
NCI	595	622	601	649	741	929
NHI	251	269	327	373	388	422
NIAID	[2] 495	507	437	508	444	486
NIAMD	304	323	327	353	378	408
NICHD	.....	.....	.....	.....	.....	.....
NIDR	75	76	77	93	104	122
NIMH	305	341	319	347	424	515
NINDB	17	35	81	145	196	276
CC	.....	50	627	645	946	1,407
DBS	.....	.....	.....	.....	121	167
DGMS	.....	.....	.....	.....	.....	.....
DRFR	.....	.....	.....	.....	.....	.....
DRG [3]	285	318	101	102	138	204
DRS	.....	.....	.....	.....	.....	729
Total	3,012	3,277	3,888	4,621	5,412	6,334

[1] Through 1958, includes Division of Business Operations.

[2] Through 1955, National Microbiological Institute.

[3] Employees for 1951 and 1952 include study section members, who until 1953 were included in Division personnel listings.

NIH Employees by Institute (1951–64)—Continued

Institute	1957	1958	1959	1960	1961	1962	1963	1964[6]
OD	696	779	808	908	[4] 1,083	1,335	1,421	1,498
NCI	1,118	1,038	1,214	1,201	1,295	1,323	1,331	1,273
NHI	476	473	574	641	666	705	745	756
NIAID	517	511	578	600	656	706	718	703
NIAMD	475	432	585	624	654	668	688	625
NICHD	.....	.....	.....	.....	.....	.....	99	186
NIDR	148	122	169	180	258	286	289	312
NIMH	648	621	874	918	1,098	1,214	1,307	1,321
NINDB	336	296	507	576	731	746	747	757
CC	1,563	1,597	1,660	1,686	1,684	1,778	1,858	1,817
DBS	195	176	209	227	244	232	248	274
DGMS	.....	40	80	133	151	158	[5] 140	157
DRFR	.....	.....	.....	.....	.....	75	112	150
DRG	263	251	360	460	556	569	544	565
DRS	780	809	866	955	1,099	1,242	1,264	1,281
Total	7,215	7,145	8,484	9,109	10,175	11,037	11,511	11,675

[4] From 1961 includes Office of Administrative Management.
[5] National Institute of General Medical Sciences.
[6] As of December 31.

Total NIH Staff by Occupational Groups (1958–64)[1]

	1958	1959	1960	1961	1962	1963	1964
Professional and scientific	2,367	2,495	2,744	2,951	3,236	3,487	3,570
Subprofessional and technical support	1,426	1,460	1,587	1,709	1,814	1,796	1,870
Administrative, clerical, and office services	1,918	2,182	2,477	2,926	3,338	3,727	3,906
Plant operation and maintenance	1,263	1,317	1,255	1,383	1,487	1,518	1,538

[1] Includes employees in the metropolitan and field areas and visiting scientists.

Source: Personnel Management Branch, Office of the Director, NIH.

Total NIH Staff by Pay System (1948–64)

Year	Commissioned Corps	Civil Service	Other	Total
1948	189	1,633	[1] 423	2,245
1949	251	2,061	625	2,937
1950	279	2,038	571	2,888
1951	352	2,150	510	3,012
1952	401	2,313	563	3,277
1953	473	3,110	305	3,888
1954	515	3,811	295	4,621
1955	595	4,422	395	5,412
1956	664	5,189	481	6,334
1957	761	5,806	648	7,215
1958	777	[2] 6,197	[3] 171	7,145
1959	803	6,676	1,005	8,484
1960	875	7,166	1,068	9,109
1961	943	8,026	1,206	10,175
1962	1,049	8,964	1,024	11,037
1963	1,153	9,341	1,017	11,511
1964 [4]	1,184	9,700	938	11,822

[1] Includes consultants, members, cooperative employees, and a few miscellaneous employees (through 1957).

[2] Includes visiting scientists and staff fellows (through present).

[3] Includes part-time and intermittent employees and excludes consultants (through present).

[4] As of September 1.

Source: Personnel Management Branch, Office of the Director, NIH.

Total Full-Time NIH Civil Service Employees by GS, 208g, and Wage Board (1948–64)

Year	GS	[1] 208g	Wage Board
1948	1,397	.....	.....
1949	1,760	.....	.....
1950	1,603	1	7
1951	1,712	4	8
1952	1,848	7	9
1953	2,248	8	9
1954	2,735	13	9
1955	3,513	19	890
1956	4,164	30	995
1957	4,682	44	1,080
1958	4,989	45	1,147
1959	5,324	53	1,184
1960	5,570	58	1,445
1961	6,226	82	1,597
1962	6,976	90	1,736
1963	7,294	96	1,780
1964	7,690	92	1,764

[1] Through 1955 Public Law 692 employees.

Source: Personnel Management Branch, Office of the Director NIH.

Total NIH Professional Staff by Type of Doctoral Degree (1958–64)

Year	M.D.	Ph. D.	Other [1]	Total
1958	529	431	70	1,030
1959	563	527	62	1,152
1960	594	565	61	1,220
1961	667	614	68	1,349
1962	776	604	78	1,458
1963	890	710	111	1,711
1964	961	730	134	1,825

[1] Includes D.D.S., D.V.M., etc.

Source: Personnel Management Branch, Office of the Director, NIH.

Part VI

NIH REAL PROPERTY *and* FACILITIES

BUILDINGS AT NIH

BUILDING 1

History: Building 1 was constructed to serve as the Administration Building for NIH. Original construction plans (later changed) provided for space for various shops, a central stores operation, and a boiler plant.

Initiating legislation	June 22, 1936.
Construction begun	January 1938.
Cornerstone laid	June 30, 1938.
Construction completed	December 1938.
Occupancy by NIH	Dec. 1, 1938.
Cost of original construction	$680,746
Total cost of building (cost of original construction plus changes and improvements)	$733,610
Gross area (sq. ft.)	95,950
Space allocations (sq. ft.):	
Laboratory	370
Office	31,830
Animals	.....
Special equipment	2,345
Miscellaneous	41,111
Total	75,656

Present use: Administration.

BUILDING 2

History: Building 2 was constructed as a laboratory research building. It was originally called the Industrial Hygiene Laboratory Building.

Initiating legislation	June 22, 1936.
Construction begun	January 1938.
Cornerstone laid	.....
Construction completed	December 1938.
Occupancy by NIH	Do.
Cost of original construction	$327,966
Total cost of building (cost of original construction plus cost of changes and improvements)	$500,607
Gross area (sq. ft.)	46,860
Space allocations (sq. ft.):	
Laboratory	17,127
Office	3,333
Animal	1,995
Special equipment	3,219
Miscellaneous	12,250
Total	37,924

Present use: Research by NIAMD.

BUILDING T–2

History: Building T–2 was constructed by NIH personnel as chemical storage space.

Initiating legislation	.....
Construction begun	.....
Cornerstone laid	.....
Construction completed	1951
Occupancy by NIH	.....
Cost of original construction	$2,000
Total cost of building (cost of original construction plus cost of changes and improvements)	$2,000
Gross area (sq. ft.)	495
Space allocations (sq. ft.):	
Laboratory	.....
Office	.....
Animal	.....
Special equipment	.....
Miscellaneous	.....
Total	.....

Present use: Storage.

BUILDING 3

History: Building 3 was constructed to provide space for offices, laboratory research, and animal breeding. It was originally called the Public Health Methods and Animal Unit Building.

Initiating legislation	June 22, 1936.
Construction begun	January 1938.
Cornerstone laid	.....
Construction completed	December 1938.
Occupancy by NIH	Do.
Cost of original construction	$327,996
Total cost of building (cost of original construction plus cost of changes and improvements)	$582,541
Gross area (sq. ft.)	46,860
Space allocations (sq. ft.):	
Laboratory	12,729
Office	1,509
Animal	4,491
Special equipment	3,083
Miscellaneous	16,745
Total	38,557

Present use: Research by NHI and NIAMD.

BUILDING 4

History: Building 4 was constructed for laboratory research for NIAMD.

Initiating legislation	June 21, 1936.
Construction begun	December 1938.
Cornerstone laid	.....
Construction completed	May 1941.
Occupancy by NIH	Do.
Cost of original construction	$554,573
Total cost of building (cost of original construction plus cost of changes and improvements)	$788,263
Gross area (sq. ft.)	67,500
Space allocations (sq. ft.):	
Laboratory	21,033
Office	3,156
Animal	6,404
Special equipment	2,204
Miscellaneous	23,809
Total	56,606

Present use: Research by NIAMD.

BUILDING T–4

History: Building T–4 was constructed as a research center for the treatment of mentally disturbed children.

Initiating legislation	.....
Construction begun	July 1956.
Cornerstone laid	.....
Construction completed	May 1957.
Occupancy by NIH	June 1957.
Cost of original construction	$108,392
Total cost of building (cost of original construction plus cost of changes and improvements)	$129,453
Gross area (sq. ft.)	6,319
Space allocations (sq. ft.)	
Laboratory	.....
Office	2,496
Animal	.....
Special equipment	1,365
Miscellaneous	1,546
Total	5,407

Present use: Vacant.

BUILDING 5

History: Building 5 was constructed for laboratory research by NIAID.

Initiating legislation	June 21, 1938.
Construction begun	December 1938.
Cornerstone laid	.....
Construction completed	May, 1941.
Occupancy by NIH	Do.
Cost of original construction	$554,573
Total cost of building (cost of original construction plus cost of changes and improvements)	$769,471
Gross area (sq ft.)	67,500
Space allocations (sq. ft.)	
Laboratory	17,731
Office	4,300
Animal	8,865
Special equipment	1,400
Miscellaneous	24,166
Total	56,462

Present use: Research by NIAID.

BUILDING 6

History: Building 6 was constructed as a research laboratory for NCI.

Initiating legislation	August 5, 1937.
Construction begun	August 1938.
Cornerstone laid	June 24, 1939.
Construction completed	October 1939.
Occupancy by NIH	Do.

Cost of original construction	$659, 761
Total cost of building (cost of original construction plus cost of changes and improvements)	$905, 415
Gross area (sq. ft.)	67, 500
Space Allocation (sq. ft.)	
Laboratory	18, 250
Office	2, 459
Animal	10, 100
Special equipment	2, 102
Miscellaneous	22, 935
Total	55, 846

Present use: Cancer research.

BUILDING 7

History: Formerly called Memorial Laboratory, Building 7 was constructed as a research laboratory for the NIAID. The building has many special features (such as electrically heated grids for sterilizing air) that permit study of extremely infectious diseases.

Initiating legislation	Aug. 25, 1937.
Construction begun	July 1945.
Cornerstone laid	.....
Construction completed	May 1946.
Occupancy by NIH	March 1947.
Cost of original construction	$1, 192, 634
Total cost of building (cost of original construction plus cost of changes and improvements)	$1, 232, 105
Gross area (sq. ft.)	48, 460
Space allocations (sq. ft.):	
Laboratory	11, 025
Office	4, 557
Animal	2, 550
Special equipment	360
Miscellaneous	23, 437
Total	41, 929

Present use: Infectious disease research and research by NINDB.

BUILDING T–7

History: Building T–7 was built by the Department of Navy and Public Health Service for simulated altitude testing during World War II. In its refrigerated "high altitude chamber," personnel and altitude equipment were tested until about 1954.

Initiating legislation	.....
Construction begun	January 1942.
Cornerstone laid	.....
Construction completed	May 1943.
Occupancy by NIH	1943.
Cost of original construction	$49, 200
Total cost of building (cost of original construction plus cost of changes and improvements)	$49, 200
Gross area (sq. ft.)	1, 800
Space allocations (sq. ft.): Special equipment	1, 723

Present use: NIAMD presently conducts physiological studies of high-altitude stress on animals in the chamber which is no longer refrigerated.

BUILDING 8

History: Building 8 was constructed as an office building.

Initiating legislation	.....
Construction begun	April 1945.
Cornerstone laid	.....
Construction completed	December 1946.
Occupancy by NIH	Do.
Cost of original constructon	$199, 614
Total cost of building (cost of original construction plus cost of changes and improvements)	$613, 747
Gross area (sq. ft.)	35, 200
Space allocations (sq. ft.):	
Laboratory	10, 450
Office	1, 898
Animal	3, 855
Special equipment	1, 101
Miscellaneous	14, 943
Total	32, 247

Present use: Research by Laboratory Aids Branch, NCI, NIAID, NINDB.

BUILDING 9

History: Building 9 was constructed to house facilities for breeding smaller animals for research.

Initiating legislation	.....
Construction begun	September 1942.
Cornerstone laid	.....
Construction completed	February 1943.
Occupancy by NIH	January 1943.
Cost of original construction	$197, 451
Total cost of building (cost of original construction plus cost of changes and improvements)	$793, 934
Gross area (sq. ft.)	32, 500
Space allocations (sq. ft.):	
Laboratory	8, 172
Office	2, 209
Animal	5, 270
Special equipment	2, 167
Miscellaneous	11, 810
Total	29, 628

Present use: Research by NIMH and NINDB.

BUILDING 10

History: Building 10 was constructed as a research hospital in which laboratory research and clinical investigations with associated patient care take place.

Initiating legislation	June 14, 1948.
Construction begun	November 1948.
Cornerstone laid	June 22, 1951.
Construction completed	Aug. 26, 1955.
Occupancy by NIH	November 1952 (staff).
Cost of original construction	$30,418,308
Total cost of building (cost of original construction plus cost of changes and improvements)	$31,197,195
Gross area (sq. ft.)	1,246,860

Space allocations (sq. ft.): *	
Laboratory	157,186
Office	118,578
Animal	19,960
Special equipment	128,092
Miscellaneous	663,119
Total	1,086,935

Present use: Research hospital.

*Includes surgical wing (10A).

BUILDING 10A

History: Building 10A, the "Surgical Wing," was constructed to house research facilities for cardiac and neurosurgery, associated research laboratories, and the NIH Blood Bank.

Initiating legislation	1957 appropriation act.
Construction begun	August 1959.
Cornerstone laid	.....
Construction completed	January 25, 1963.
Occupancy by NIH	Do.
Cost of original construction	$1,551,462
Total cost of building (cost of original construction plus cost of changes and improvements)	$1,822,695
Gross area (sq. ft.)	44,704

Space allocations (sq. ft.): Included under Building 10 space allocations.

Present use: Stated above.

BUILDINGS 11 AND 11A–C

History: Buildings 11 and 11A were constructed for central utility production, including steam, compressed air, chilled water for air-conditioning systems, and emergency electric power. The buildings also house the incineration plant and the GI can-washing facitities.

Initiating legislation	June 1948 and June 1949 (11–11A).
Construction begun	January 1951.
Cornerstone laid	.....
Construction completed	11: March 1954. 11A: June 1955. 11B: 1959. 11C: 1961.
Occupancy by NIH	11: November 1952. 11A: May 1953. 11B: 1959. 11C: 1961.
Cost of original construction	$240,244
Total cost of building (cost of original construction plus cost of changes and improvements)	$6,302,157
Gross area (sq. ft.)	115,454

Space allocations (sq. ft.):	
Laboratory	330
Office	320
Animal	.....
Special equipment	.....
Miscellaneous	79,148
Total	79,798

Present use: Central utility production: boiler plant (11), incinerator (11A), additional compressors (11B–C).

BUILDING 12

History: Building 12 was constructed to provide maintenance, overhaul, and storage facilities for NIH vehicles, and to provide general storage space.

Initiating legislation	June 1948–June 1949.
Construction begun	May 1949.
Cornerstone laid	.....
Construction completed	October 1950.
Occupancy by NIH	September 1950.
Cost of original construction	$897,842
Total cost of building (cost of original construction plus cost of changes and improvements)	$1,168,231
Gross area (sq. ft.)	52,140

Space allocations (sq. ft.):	
Laboratory	.....
Office	8,706
Animal	9,551
Special equipment	7,927
Miscellaneous	23,538
Total	49,722

Present use: Serves as a garage and fire department. Houses statistical processing facilities and animals for biologics control program. Stores surplus property.

BUILDING 13

History: Building 13 was constructed to house facilities for general maintenance and repair work, scientific apparatus construction, stores and stock (including refrigerated food storage), and laundry and drycleaning facilities.

Initiating legislation	June 1948 and June 1949.
Construction begun	December 1950.
Cornerstone laid	.....
Construction completed	August 1952.
Occupancy by NIH	Do.

Cost of original construction	$3,324,231
Total cost of building (cost of original construction plus cost of changes and improvements)	$3,953,582
Gross area (sq. ft.)	212,690

Space allocations (sq. ft.):

Laboratory	456
Office	36,686
Animal	.....
Special equipment	735
Miscellaneous	168,303
Total	206,180

Present use: General maintenance and repair work (shops), laundry and drycleaning, storage, purchasing section, property utilization, and Research Facilities Planning Branch, OAM.

BUILDINGS 14A–D

History: Buildings 14A through D were constructed for housing and breeding small animals, storage of animal food and bedding, cage washing and sterilization.

Initiating legislation	June 29, 1949.
Construction begun	September 1951.
Cornerstone laid	.....
Construction completed	November 1953.
Occupancy by NIH	February 1954.

Cost of original construction	$3,492,122
Total cost of building (cost of original construction plus cost of changes and improvements)	$3,643,901
Gross area (sq. ft.) (Buildings 14A–G)	233,006

Space allocations (sq. ft.) (Buildings 14A–G):

Laboratory	275
Office	2,697
Animal	113,053
Special equipment	280
Miscellaneous	103,487
Total	219,792

Present use: Stated above.

BUILDING 14E

History: Building 14E was constructed to house monkeys for polio research.

Initiating legislation	June 29, 1949.
Construction begun	September 1955.
Cornerstone laid	.....
Construction completed	January 1956.
Occupancy by NIH	February 1956.

Cost of original construction	$446,900
Total cost of building (cost of original construction plus cost of changes and improvements)	$446,900

Gross area: See Buildings 14A–D.
Space allocations: See Buildings 14A–D.
Present use: Same as Buildings 14A–D.

BUILDING 14F

History: Building 14F was constructed for animal housing and breeding. From 1957 to 1963 it was used for temporary office space and was called Building T–18.

Initiating legislation	July 1956.
Construction begun	December 1956.
Cornerstone laid	.....
Construction completed	September 1957.
Occupancy by NIH	Do.

Cost of original construction	$549,517
Total cost of building (cost of original construction plus cost of changes and improvements)	$586,375

Gross area (sq. ft.): See Buildings 14A–D.
Space allocations: See Buildings 14A–D.
Present use: Stated above.

BUILDING 14G

History: Building 14G was constructed for animal housing and breeding. From 1957 to 1963 it was used for temporary office space and was called Building T–19.

Initiating legislation	July 1956.
Construction begun	December 1956.

Cornerstone laid	.....
Construction completed	September 1957.
Occupancy by NIH	Do.
Cost of original construction	$549,517
Total cost of building (cost of original construction plus cost of changes and improvements)	$556,591

Gross area: See Building 14A–D.
Space allocations: See Building 14A–D.
Present use: Animal housing and breeding.

BUILDING 15A

History: Building 15A was formerly the private residence of Helen Woodward Wilson. She donated it to NIH on September 30, 1938, along with a 14.4-acre tract of land.

Initiating legislation	.....
Construction begun	.....
Cornerstone laid	.....
Construction completed	.....
Occupancy by NIH	.....
Cost of original construction	$9,000 estimate.
Total cost of building (cost of original construction plus cost of changes and improvements)	$9,400
Gross area (sq. ft.)	3,010

Present use: Living quarters for the Chief, Plant Engineering Branch.

BUILDINGS 15B–G

History: Buildings 15B–G are duplex housing units constructed as officers' quarters.

Initiating legislation	June 1938.
Construction begun	December 1938.
Cornerstone laid	.....
Construction completed	January 1940.
Occupancy by NIH	Do.
Cost of original construction	$38,600 each. $231,600 total.
Total cost of building (cost of original construction plus cost of changes and improvements)	$40,064 each. $260,772 total.

Gross area (sq. ft.): 8,065 each building (containing 2 housing units), or 48,390 total.
Present use: Officers' quarters.

BUILDINGS 15H AND I

History: Buildings 15H and I are single housing units constructed as officers' quarters.

Initiating legislation	June 1938.
Construction begun	December 1938.
Cornerstone laid	.....
Construction completed	January 1940.
Occupancy by NIH	Do.
Cost of original construction	$38,600 each. $77,200 total
Total cost of building (cost of original construction plus cost of changes and improvements)	$93,141
Gross area (sq. ft.)	6,010 each. 12,020 total.

Present use: Officers' quarters.

BUILDING 15K

History: Building 15K was formerly the residence of Helen Woodward and Luke I. Wilson. It was donated to NIH on March 17, 1942, along with a 10.87-acre tract of land.

Initiating legislation	.....
Construction begun	.....
Cornerstone laid	.....
Construction completed	.....
Occupancy by NIH	.....
Cost of original construction	$62,500 estimate.
Total cost of building (cost of original construction plus cost of changes and improvements)	$64,548
Gross area (sq. ft.)	11,670

Space allocations (sq. ft.):

Laboratory	.....
Office	3,941
Animal	.....
Special equipment	.....
Miscellaneous	3,105
Total	7,046

Present use: Child Research Branch, NIMH.

BUILDING 16

History: Building 16 was formerly the residence of G. Freeland Peter and Lulie Whitlock Peter. It was acquired in the purchase of the Peter's estate (47.9 acres) for $505,000 on February 14, 1949.

Initiating legislation	.....
Construction begun	.....
Cornerstone laid	.....
Construction completed	.....
Occupancy by NIH	Dec. 20, 1950.
Cost of original construction	$133,500 estimate.

Total cost of building (cost of original construction plus cost of changes and improvements)	$188,202
Gross area (sq. ft.)	17,480

Space allocations (sq. ft.):	
Laboratory	.....
Office	7,942
Animal	.....
Special equipment	258
Miscellaneous	5,124
Total	13,324

Present use: Office space.

BUILDING 16A

History: Building 16A was formerly the residence of the caretaker for the Peter Estate. It was acquired in the purchase of the Peter Estate on February 14, 1949.

Initiating legislation	.....
Construction begun	.....
Cornerstone laid	.....
Construction completed	.....
Occupancy by NIH	Dec. 20. 1950.
Cost of original construction	$16,000 estimate.
Total cost of building (cost of original construction plus cost of changes and improvements)	$16,000
Gross area (sq. ft.)	2,880

Space allocations (sq. ft.)	
Laboratory	.....
Office	1,473
Animal	.....
Special equipment	.....
Miscellaneous	1,799
Total	3,272

Present use: Office space.

BUILDINGS 17 AND 17A

History: Buildings 17 and 17A were constructed to house the 13.2 kv switchgear and associated equipment necessary for power services to the NIH reservation. The buildings were designed and constructed, and are owned by the Potomac Electric Power Co.

Initiating legislation	.....
Construction begun	.....
Cornerstone laid	.....
Construction completed	.....
Occupancy by NIH	.....
Cost of original construction	.....
Total cost of building (cost of original construction plus cost of changes and improvements)	.....
Gross area (sq. ft.)	7,651

Space allocations (sq. ft.)	
Laboratory	.....
Office	.....
Animal	.....
Special equipment	.....
Miscellaneous	7,222
Total	7,222

Present use: Electrical power vault.

BUILDING 20

History: Building 20 was constructed as an apartment building for occupancy by certain NIH personnel.

Initiating legislation	September 1950.
Construction begun	September 1952.
Cornerstone laid	.....
Construction completed	November 1953.
Occupancy by NIH	January 1954.
Cost of original construction	$971,973
Total cost of building (cost of original construction plus cost of changes and improvements)	$975,508
Gross area (sq. ft.)	66,880

Space allocations (sq. ft.)	
Laboratory	.....
Office	85
Animal	.....
Special equipment	.....
Miscellaneous	1,240
Total	1,325

Present use: Apartment building.

BUILDING 21

History: Building 21, formerly called Building T–3, was constructed to provide a segregated working area for use of radioisotopes.

Initiating legislation	June 1948.
Construction begun	November 1948.
Cornerstone laid	.....
Construction completed	December 1949.
Occupancy by NIH	June 1950.
Cost of original construction	$397,648
Total cost of building (cost of original construction plus cost of changes and improvements)	$444,584
Gross area (sq. ft.)	12,105

Space allocations (sq. ft.)	
Laboratory	2,794
Office	994
Animal	
Special equipment	
Miscellaneous	5,986
Total	9,774

Present use: Segregated working area for use of radioisotopes, especially for the preparation of "tagged" compounds and their dilution to levels at which they can be safely handled in other laboratory areas.

BUILDING 22

History: Building 22 was constructed to house the grounds maintenance staff and equipment.

Initiating legislation	September 1959 and August 1951.
Construction begun	December 1951.
Cornerstone laid	.....
Construction completed	September 1952.
Occupancy by NIH	October 1952.
Cost of original construction	$178,524
Total cost of building (cost of original construction plus cost of changes and improvements)	$178,524
Gross area (sq. ft.)	15,810
Space allocations (sq. ft.)	
Laboratory	.....
Office	733
Animal	.....
Special equipment	.....
Miscellaneous	14,246
Total	14,979

Present use: Space for grounds maintenance staff and equipment.

BUILDING 25

History: Building 25 was constructed as a chemical storage area.

Initiating legislation	June 1949.
Construction begun	.....
Cornerstone laid	.....
Construction completed	November 1953.
Occupancy by NIH	.....
Cost of original construction	$95,842
Total cost of building (cost of original construction plus cost of changes and improvement)	$95,842
Gross area (sq. ft.)	4,445
Space allocations (sq. ft.)	
Laboratory	.....
Office	76
Animal	.....
Special equipment	.....
Miscellaneous	5,130
Total	5,206

Present use: Chemical storage.

BUILDING 26

History: "Building" 26, which is actually a fenced-in area, was constructed in 1954 as a temporary chemical disposal plant. In August 1958 a permanent facility was constructed on contract, and further improvements were made in August 1960.

Initiating legislation	.....
Construction begun	1954
Cornerstone laid	.....
Construction completed	1954
Occupancy by NIH	.....
Cost of original construction	$5,725
Total cost of building (cost of original construction plus cost of changes and improvements)	37,327

Gross area: No figures available.
Present use: Chemical disposal.

BUILDING 27

History: Building 27 was constructed as a storage area for toxic and flammable gases.

Initiating legislation	June 1949.
Construction begun	.....
Cornerstone laid	.....
Construction completed	November 1953.
Occupancy by NIH	.....
Cost of original construction	$2,200
Total cost of building (cost of original construction plus cost of changes and improvements)	$2,200
Gross area (sq. ft.)	210
Space allocations (sq. ft.):	
Laboratory	.....
Office	.....
Animal	.....
Special equipment	.....
Miscellaneous	205
Total	205

Present use: Storage of toxic and flammable gases.

BUILDINGS 28A–D

History: Building 28 was constructed to house the dog kennels and animal hospital.

Initiating legislation	June 1949.
Construction begun	September 1951 (Wing B and Building 28). January 1957 (Wings A, C, and D).
Cornerstone laid	.....

Construction completed	November 1953 (Wing B and Building 28). January 1958 (Wings A, C, and D).
Occupancy by NIH	February 1954 (Wing B and Building 28). February 1958 (Wings A, C, and D).

Cost of original construction	$687,869
Total cost of building (cost of original construction plus cost of changes and improvements	$699,386
Gross area (sq. ft.)	26,589

Space allocations (sq. ft.):	
Laboratory	2,930
Office	701
Animal	9,352
Special equipment	511
Miscellaneous	9,148
Total	22,642

Present use: Stated above.

BUILDING 29

History: Building 29 was built to provide laboratory and office space for the Division of Biologics Standards.

Initiating legislation	1956.
Construction begun	May 26, 1958.
Cornerstone laid	.....
Construction completed	July 21, 1960.
Occupancy by NIH	Aug. 29, 1960.

Cost of original construction	$3,257,738
Total cost of building (cost of original construction plus cost of changes and improvements)	$3,257,738
Gross area (sq. ft.)	87,898

Space allocations (sq. ft.):	
Laboratory	13,165
Office	7,691
Animal	7,006
Special equipment	1,860
Miscellaneous	40,409
Total	70,131

Present use: Stated above.

BUILDING 30

History: Building 30 was constructed to provide laboratory and office space for the National Institute of Dental Research.

Initiating legislation	July 31, 1956.
Construction begun	Mar. 24, 1959.
Cornerstone laid	Sept. 21, 1960.
Construction completed	July 27, 1961.
Occupancy by NIH	May 18, 1961.

Cost of original construction	$3,447,304
Total cost of building (cost of original construction plus cost of changes and improvements)	$3,447,304
Gross area (sq. ft.)	92,601

Space allocations (sq. ft.):	
Laboratory	14,759
Office	7,951
Animal	4,604
Special equipment	3,583
Miscellaneous	42,129
Total	73,026

Present use: Stated above.

BUILDING 31

History: Building 31 was constructed to provide office space for most of the Institute Directors and their immediate staffs, supporting central services for this area, and additional conference space for study sections, councils, other consultant groups, and NIH staff. Building T–6 was razed in 1961 to make room for a parking lot for Building 31, and Building 15L was razed in 1962 to make room for Building 31.

Initiating legislation	July 31, 1956.
Construction begun	October 1959.
Cornerstone laid	Oct. 31, 1961.
Construction completed	April 1962.
Occupancy by NIH	Oct. 20, 1961.

Cost of original construction	$8,139,974
Total cost of building (cost of original construction plus cost of changes and improvements)	$8,139,974
Gross area (sq. ft.)	349,922

Space allocations (sq. ft.):	
Laboratory	.....
Office	190,456
Animal	.....
Special equipment	7,212
Miscellaneous	88,704
Total	286,372

Present use: Stated above.

BUILDING 32A

History: Building 32A was constructed for use in NIMH investigations of biology and the biochemistry of medicinal plants.

Initiating legislation	...
Construction begun	July 28, 1958.
Cornerstone laid	.....
Construction completed	Oct. 26, 1959.
Occupancy by NIH	Feb. 9, 1959.

Cost of original construction	$120, 721
Total cost of building (cost of original construction plus cost of changes and improvements)	$169, 807
Gross area (sq. ft.)	4, 910
Space allocations (sq. ft.):	
Laboratory	3, 900
Office	.....
Animal	.....
Special equipment	.....
Miscellaneous	.....
Total	3, 900

Present use: Stated above.

Summary Data on NIH Buildings

Building	Date of completion	Cost of original construction	Total cost [1]	Gross floor area (sq. ft.)
1	December 1938	$680, 746	$733, 610	95, 950
2	do	327, 996	500, 607	46, 860
T–2	1951	2, 000	2, 000	495
3	December 1938	327, 996	582, 541	46, 860
4	May 1941	554, 573	788, 263	67, 500
T–4	May 1957	108, 392	129, 453	6, 319
5	May 1941	554, 573	769, 471	67, 500
6	October 1939	659, 761	905, 415	67, 500
7	May 1946	1, 192, 634	1, 232, 105	48, 460
T–7	May 1943	49, 200	49, 200	1, 800
8	December 1946	199, 614	613, 747	35, 200
9	February 1943	197, 451	793, 936	32, 500
10	August 1955	30, 418, 308	31, 197, 195	1, 246, 860
10A	January 1963	1, 551, 462	1, 822, 695	44, 704
11	March 1954	[2] 6, 240, 244	[2] 6, 302, 157	[2] 115, 454
12	October 1950	897, 842	1, 168, 231	52, 140
13	August 1952	3, 324, 231	3, 953, 582	212, 690
14A–D	November 1953	3, 492, 122	3, 643, 901	[3] 233, 006
14E	January 1956	446, 900	446, 900	(see 14A–D)
14F	September 1957	549, 517	586, 375	(see 14A–D)
14G	do	549, 517	556, 591	(see 14A–D)
15A		[4] 9, 000	9, 400	3, 010
15B–G	January 1940	231, 600	260, 772	48, 390
15H–I	do	77, 200	93, 141	12, 020
15K		[4] 62, 500	64, 548	11, 670
15L		[4] 3, 335	([5])	1, 730
16		[4] 133, 500	188, 202	17, 480
16A		[4] 16, 000	16, 000	2, 880
17		Owned by Pepco		7, 651
20	November 1953	971, 973	975, 508	66, 880
21	December 1949	397, 648	444, 589	12, 105
22	September 1952	178, 524	178, 524	15, 810
25	November 1953	95, 842	95, 842	4, 445
27	do	2, 200	2, 200	210
28	do	687, 869	699, 386	26, 589
29	July 1960	3, 257, 738	3, 257, 738	87, 898
30	July 1961	3, 447, 304	3, 447, 304	92, 601
31	April 1962	8, 139, 974	8, 139, 974	349, 922
32A	October 1959	120, 721	169, 807	4, 910
Total		70, 157, 947	74, 820, 903	3, 187, 999

[1] Includes cost of original construction plus cost of changes and improvements.
[2] Includes Buildings 11, 11A, 11B, and 11C.
[3] Includes Buildings 14A–G.
[4] Estimate.
[5] Destroyed.

NIH Land

Method of acquisition	Dates acquired	Area (acres)	Present value [1]
Donation	1935–1942	92. 5	$374, 000
Purchase	1949	213. 9	1, 364, 000
Total land		306. 4	1, 738, 000

[1] Land values reflect improvements in land as of June 30, 1963.

Acquisition of NIH Land

Method and source of acquisition	Date acquired	Number of acres	Original estimated value or actual cost	Buildings now located on parcel
Donated by Helen Woodward Wilson and Luke I. Wilson. Consideration $10.	Deed dated 8–10–35 and recorded 9–11–35.	44. 956	[1] $74, 932	1, 2, 3, 4, 5, 7, 8, 9, 10 (part), 17, 21, T–2, T–7.
Donated by Helen Woodward Wilson. Consideration $10.	Deed dated 5–28–38 and recorded 6–20–38.	10. 65	[1] 17, 670	6, 15D, 15E, 15G.
Donated by Helen Woodward Wilson. Consideration $1.	Deed dated 9–30–38 and recorded 10–1–38.	14. 437	[1] 24, 055	15A, 15B, 15C, 15F, 15H, 15I.
Do.	Deed dated 9–27–40 and recorded 9–27–40.	11. 583	[1] 19, 304	31.
Donated by Helen Woodward Wilson. Consideration $5.	Deed dated 3–17–42 and recorded 3–28–42.	10. 87	[1] 18, 120	15K.
Purchased from Sisters of Visitation.	Condemnation judgment issued on declaration of taking 9–23–48. Receipt of final payment acknowledged 6–28–49.	50. 1661	173, 058	10 (part), 10A, 20.
Purchased from George F. Peter and Lulie W. Peter.	Deed dated 2–14–49	47. 9028	505, 000	11–11A (part), 11B–C, 12, 13 (part), 14B–D (part), 14F–G (part), 16, 16A, 17A, 22, 25, 26, 27.
Purchased from Town & Country Golf Club, Inc.	Deed dated 2–11–49 and recorded 2–14–49.	115. 84	600, 000	11–11A (part), 13 (part), 14A, 14B–D (part), 14E, 14F–G (part), 28A–D, 29, 30, 32, 38, T–4.

[1] Estimated value obtained from Montgomery County assessment records.

Estimated Cost [1] of Facilities Serving NIH Buildings

[As of June 30, 1964]

Facility	Cost
Fences	$52, 248
Water distribution system, including fire hydrants and wells	121, 948
Chilled water distribution system	257, 311
Gas distribution system	31, 669
Compressed air distribution system	10, 324
Electrical distribution system	2, 142, 037
Steam distribution system	293, 542
Sanitary sewer system	210, 026
Storm sewer system	442, 878
Surfaced areas:	
Roadways and related bridges	327, 159
Sidewalks and related bridges	33, 685
Parking areas	491, 611
Total	4, 414, 438

[1] The actual cost of facilities was used when available. However, in most cases the construction cost of a building or group of buildings included the facilities serving those buildings, in which case the cost was estimated at prices applicable at the time of construction, and the estimated cost of the facility was deducted from the cost of the building.

Source: DRS Plant Engineering Branch.

Utilities

[Annual use in fiscal year 1964]

Utility	Cost
Heating (fuel oil)	$448, 933
Water	209, 443
Electricity	889, 629
Gas (bunsen burners, etc.)	3, 821
Telephone (including long distance and equipment charges)	1, 251, 470
Total	2, 803, 296

Sources: Budget Office, DRS; Communications Section, OSB, OD.

Buildings Rented by NIH

(As of Jan. 31, 1965)

Adelphi Plaza
2340 University Boulevard
Adelphi, Md.
- Annual payment: $60,204.
- Total leased area: 13,840 sq. ft.
- Use: Office space for Mental Health Study Center, NIMH.

Auburn Building
4915–21 Auburn Avenue
Bethesda, Md.
- Annual payment: $100,300.
- Total leased area: 19,672 sq. ft.
- Use: Laboratory space.

Blackwell Building
7758 Wisconsin Avenue
Bethesda, Md.
- Annual payment: $32,382.
- Total leased area: 7,496 sq. ft.
- Use: Office space.

National Bank Building
6917 Arlington Road
Bethesda, Md.
- Annual payment: $79,110.
- Total leased area: 17,580 sq. ft.
- Use: Office space.

Source: Office Services Branch, OAM, OD.

Nave Building
7770 Woodmont Avenue
Bethesda, Md.
- Annual payment: $43,268.
- Total leased area: 10,462 sq. ft.
- Use: Office space.

P. J. Nee
960 Thompson Avenue
Rockville, Md.
- Annual payment: $40,015.50.
- Total leased area: 27,750 sq. ft.
- Use: Warehouse space.

North Bethesda Office Center No. 1
11420 Rockville Pike
Rockville, Md.
- Annual payment: $132,571.
- Total leased area: 28,600 sq. ft.
- Use: Office space.

North Bethesda Office Center No. 2
11424 Rockville Pike
Rockville, Md.

Annual payment	$161,057.
Total leased area	34,210 sq. ft.
Use	Office space.

Trunnell Building
4865 Cordell Avenue
Bethesda, Md.

Annual payment	$25,764.
Total leased area	5,720 sq. ft.
Use	Office space.

Westwood Building
5333 Westbard Avenue
Bethesda, Md.

Annual payment	$740,954.
Total leased area	170,326 sq. ft.
Use	Office space.

Wiscon Building
7550 Wisconsin Avenue
Bethesda, Md.
[Not finally assigned]

Total annual payment	**$1,703,725.50.[1]**
Total leased area for all buildings	**407,411 sq. ft.[1]**

[1] Excluding Wiscon Building.

Part VII

FIELD UNITS

NIH FIELD UNITS

Oversea Units

NIH–SEATO Cholera Research Laboratory
Dacca, East Pakistan

Established by NIH under an agreement with the International Cooperation Administration, this laboratory was dedicated December 5, 1960. It is the site of clinical investigations of the acute phase of cholera, of field studies of cholera, and of research designed to isolate the organism causing cholera. Laboratory personnel investigate outbreaks of cholera in Southeast Asia and cooperate with other nations participating in the SEATO Cholera Research Program.

NIH West Africa Research Laboratory
Accra, Ghana

Established in April 1962, this laboratory resulted from a request from President Nkrumah of Ghana to President John F. Kennedy that the U.S. Government collaborate with the National Institute of Health and Medical Research of Ghana in developing a program of research on health problems of concern to both countries. The Ghanaian Government agreed to provide laboratory space and clinical facilities and the United States provided staff, equipment, and supplies. It is hoped that the Laboratory will provide information on etiological factors in malignant disease in Africa, since Ghana presents a cross section of cancer problems in Africa south of the Sahara and has a high incidence of an unusual lymphoma. Ghana also offers many opportunities for study of other diseases rarely seen in unmodified form in the United States.

Far East Research Project of the Laboratory of Parasite Chemotherapy, NIAID
Kuala Lumpur, Malaysia

Established in August 1960, this laboratory was the site of investigations of human and monkey malaria. Inactivated on October 31, 1964, and personnel transferred to the Cytology Section of the Laboratory of Parasite Chemotherapy, Chamblee, Ga.

Middle America Research Unit of the Laboratory of Tropical Virology, NIAID
Panama Canal Zone, Panama

Established in 1957 and made a permanent field station in 1961, this laboratory is the site of research conducted in cooperation with elements of the U.S. Armed Forces to study the etiology, epidemiology, and ecology of viral and mycotic diseases occuring in the American tropics. Early emphasis was on arthropod-borne viruses and histoplasmosis, and present studies focus on Bolivian hemorrhagic fever, the encephalitides, and the epidemiology of histoplasmosis in bats in Panama.

Laboratory of Perinatal Physiology of the NINDB
San Juan, P.R.

Primate studies at this laboratory, established in 1956, are increasing knowledge of the perinatal causes of cerebral palsy, mental retardation, and other developmental neurosensory disabilities in humans. These investigations of harmful factors producing injury to newborn monkeys complement the Institute's Collaborative Perinatal Project. Laboratory facilities include a free-ranging colony of monkeys on the island of Cayo Santiago, P.R., and a caged breeding colony on the grounds of the USPHS quarantine station in San Juan. The physical and neurological development of animals of known age and state of health in the free-ranging and caged colonies are being compared. These studies provide valuable observations of deviations of development imposed by the experimental environment.

Long-range research on the central nervous system, particularly its developmental aspects, is now the

Laboratory's major focus. Broad interests of the Laboratory include neuroanatomy, physiological analysis of behavior, neurophysiology, and primate econology.

New Guinea Projects, NINDB

Since 1963, kuru, a chronic progressive disease of the central nervous system, has been studied in primitive populations on New Guinea. Efforts are being made to determine whether the disease is caused by a slow virus infection. Another project involves investigating the high incidence of a wide variety of congenital defects of the central nervous system associated with hyperendemic goiter in a particular tribe. This group is being studied in order to learn more about a wide array of nervous system defects, such as congenital deaf-mutism, and mental and motor abnormalities associated with cretinism.

This oversea unit is also a background for ethnoenvironmental studies of child growth and development and disease patterns in primitive cultures.

Epidemiology and Genetics Center, NINDB
Guam

Since 1957, the unusual frequency of amyotrophic lateral sclerosis (ALS), discovered in an epidemiological survey, has been studied by a branch of NINDB. A laboratory has been established on Guam, where a form of ALS is over 100 times more common than in the continental United States, to obtain materials for epidemiologic and genetic studies. Originally ALS was thought to be a genetically determined, inherited disease, but mounting evidence seems to indicate that some environmental factor may be responsible. Extensive analyses of family histories in a village (Umatac) where prevalence is extremely high are nearing completion.

Discovery of a second focus of the disorder in the Kii Peninsula of Japan has heightened NINDB efforts, in cooperation with other scientists, to ascertain the pattern of ALS distribution in the West Pacific islands and to evaluate as far as possible all suspicious environmental factors, including geographic, socioeconomic, dietary, and occupational features.

Domestic Units

Rocky Mountain Laboratory, NIAID
Hamilton, Mont.

At this laboratory, established in 1921, research is aimed at increasing basic knowledge of insect-and-animal-borne diseases of man and the diagnosis, treatment, and control of the diseases. Field studies of diseases having reservoirs in nature are stressed. Research on infectious allergic diseases, especially those of interest to the Western community, is conducted. The mechanisms of immunity relating to hypersensitivity and to the specific prophylaxis of fungal, rickettsial, mycobacterial, and salmonella infections are studied.

Cytology Section of the Laboratory of Parasite Chemotherapy, NIAID
Chamblee, Ga.

Established in 1959. Absorbed the Section on Epidemiology, LPC, when it was inactivated at Columbia, S.C., in 1963. Absorbed personnel of the Far East Research Project, LPC, when it was inactivated at Kuala Lumpur, Malaysia, in 1964.

Pacific Research Section of the Laboratory of Infectious Diseases, NIAID
Honolulu, Hawaii

Established in 1962, this Section provides laboratory and field base for comprehensive investigations of eosinophilic meningitis, related diseases, and other infectious diseases of specific importance to Hawaii and other Pacific islands.

Malaria Studies Project of the Laboratory of Parasite Chemotherapy, NIAID
U.S. Penitentiary
Atlanta, Ga.

Established in March 1944.

Field Epidemiology Research Section, NHI
Framingham, Mass.

This unit of the NHI Collaborative Studies organization, originally located at Memphis, Tenn., is concerned with a variety of epidemiological studies.

Epidemiology Branch of NCI
901 Victory Building
Pittsburgh, Pa.

NCI personnel, since May 1953, have conducted statistical studies of the mortality risk associated with occupational exposure at this field station.

Childhood Leukemia Study, Epidemiology Branch, NCI
Children's Cancer Research Foundation
35 Binney Street
Boston, Mass.

NCI personnel, since October 1955, have conducted statistical studies of environmental and other possible cancer-causing factors related to childhood leukemia.

Environmental Cancer Research Project, Washington County, Md.
Washington County Health Department
1300 Pennsylvania Avenue
Hagerstown, Md.

NCI personnel, since November 1958, have conducted statistical studies of a relatively stable human population of 100,000 persons in order to identify environmental, geographic, and familial factors relating to cancer causation.

Epizoology Section of the Epidemiology Branch, NCI
Michigan State University
East Lansing, Mich.

NCI personnel, since August 1961, have conducted statistical studies of various types of cancer in animals that may produce important information concerning causation of cancer in man.

Epidemiology Branch of NCI
Children's Hospital of Los Angeles
4614 Sunset Boulevard
Los Angeles, Calif.

NCI personnel, since July 1962, have conducted statistical studies of (1) excess in lung cancer mortality among Mexican women in California as compared with California-born women of Mexican descent, (2) relationship of childhood leukemia to complications of pregnancy and disorders associated with cytogenetic defects, and (3) brain tumors and congenital defects of the central nervous system in children.

The Mental Health Study Center, NIMH
2340 University Boulevard East
Adelphi, Md.

The Center was established in 1948 under the provision of the National Mental Health Act through the cooperation of interested citizens and organizations of Prince Georges County, the county and State health departments, and the Mental Hygiene Division of the U.S. Public Health Service. During the first 6 years of its existence, the Study Center was known as the Prince George County Mental Health Clinic and received its present name in 1954. As a demonstration program in community mental health, the goals of the clinic were to study methods through which its activities could be made a part of the overall health program of the county and to determine methods which communities could apply to attack the factors contributing to psychiatric disorders.

The NIMH Addiction Research Center
Lexington, Ky.

The Center had its beginning in the scientific studies of the addicting qualities of pain-relieving drugs at the U.S. Penitentiary, Fort Leavenworth, Kans. These studies were transferred to the U.S. Public Health Service Hospital at Lexington when it opened in 1935. At present, studies at the Center include biochemical, neuropharmacological, neurophysiological, and psychological studies of drug addiction, as well as studies of chronic barbiturate and alcohol addiction. In addition, the Center is conducting basic research on the psychotomimetic drugs, agents which produce symptoms similar to mental illness and which are being used as research tools. The Center also is responsible for identifying new drugs which should be considered to be within the purview of narcotics control activities carried on by the United States and the United Nations.

The Clinical Neuropharmacology Research Center, NIMH
St. Elizabeths Hospital
Washington, D.C.

Established in 1957, the Center is engaged in a broad program of studies of the effects of drugs on mental function in man, with special reference to their bearing on problems of mental disorder. The location of the Center insures direct contact with the special phenomena presented by mental illness in a mental hospital. Patients are selected from the general hospital population at St. Elizabeths so as to comprise a group representative of the kinds of mental disorders to be found in most public mental hospitals. One aim of the Center is to define special research problems presented by mental hospital populations. Another aim, through the establishment of suitable laboratories for experimental work in a mental hospital setting, is to bring the hospital closer to new knowledge being accumulated by the behavioral sciences.

Mobile Laboratory-Equipped Trailer Unit of the Arthritis and Rheumatism Branch, NIAMD

In 1960, a laboratory-equipped trailer unit operated by NIAMD began performing followup studies on relatives of former participants in arthritis research studies at NIH. Physical examinations, X-rays, blood tests, and other procedures were performed in the 22-foot trailer-truck, equipped with a special 3,000-watt generator to provide electrical power for the portable X-ray machine. Two similarly equipped mobile vans have been employed in a epidemiological population study of osteoarthritis and rheumatoid arthritis among the Blackfeet and Pima Indians, in Montana and Arizona, respectively. This study, which began in 1961, completed its first stage in 1963. In 1965, the NIAMD investigators extended its survey to include a study of the prevalence of diabetes among the Pima.

Human Development Study Center, NICHD
St. Petersburg, Fla.

The Center, established on July 1, 1964, was the first direct research facility of the NICHD and evolved from a prior Public Health Service research activity in St. Petersburg, the Study Group on Accidents and Aging. The initial research activities of the Center have been to determine changes in physiological and psychological capacities of older persons. Future studies will be broadened to include investigations of other aspects of the life cycle.

NICHD Outpatient Diagnostic and Study Unit
U.S. Naval Hospital
Bethesda, Md.

An agreement between the NICHD and the Medical Department of the Navy was signed on January 11, 1965, for the establishment of a clinical research center for the study and diagnosis of mental retardation. The Unit, though funded and staffed as a direct research activity of the NICHD, will be run on a cooperative basis with the U.S. Naval Hospital, National Naval Medical Center, which will supply supportive services. Activity will be concentrated on the biomedical and behavioral aspects of mental retardation, including diagnostic studies, parent counseling and guidance, and selected educational and therapeutic procedures for the retarded and for their families.

Patuxent Wildlife Research Center Project, NINDB
Patuxent, Md.

This project, begun in 1963, is directed toward the investigation of latent infections which may cause neurological disorders in man. Certain degenerative diseases of the nervous system are known to occur in wild animals and some are believed to be infectious. Efforts are being made to isolate slow-acting viruses which may cause such human diseases as multiple sclerosis, chronic epidemic encephalitis, kuru, ALS, and certain forms of of childhood epilepsy. A building for work with primates was constructed in 1964 for the Institute to facilitate research in virus processes that produce degenerative, slow-developing diseases of man and animals.

NIH INTERNATIONAL HEALTH OFFICES

European Office

Paris, France
Established December 18, 1961
(Science representative in London, England)

Latin American Office

Rio de Janeiro, Brazil
Established July 1, 1962
(Science representative in Rio de Janeiro, Brazil)

Pacific Office

Tokyo, Japan
Established January 1, 1963
(Science representative in New Delhi, India)

Part VIII

LECTURE SERIES

DYER LECTURE SERIES

To honor Dr. Rolla Eugene Dyer, former Director of the National Institutes of Health, the Dyer Lectureships were founded when he retired in September 1950. The lectureship awards are made for outstanding contributions to medical or biological knowledge, and the recipient chooses his subject. The following lectures have been given:

June 21, 1951 "Genetic Control of Metabolism"
George W. Beadle, Ph. D.
Kerckhoff Laboratories of Biology
California Institute of Technology

October 29, 1952 "The Virus and the Cell"
Sir F. MacFarlane Burnet, F.R.S.
Director, Walter and Eliza Hall Institute of Medical Research
Melbourne, Australia

October 22, 1953 "The Gold-Headed Cane in the Laboratory"
Rene J. Dubos, M.D.
Rockefeller Institute for Medical Research

November 17, 1954 "Recent Observations on the Behavior of Tissue Culture of Certain Viruses Pathogenic for Man"
John Franklin Enders
Associate Professor of Bacteriology
Children's Hospital
Boston, Mass.

January 31, 1956 "The Properdin System"
Louis Pillemer
Institute of Pathology
Western Reserve University

February 19, 1957 "The Natural History of Plague and Psittacosis"
Karl F. Meyer, M.D.
The George Williams Hooper Foundation
University of California Medical School

November 5, 1957 "Influenza: History, Epidemiology and Speculation"
Richard E. Shope, M.D.
The Rockefeller Institute for Medical Research

December 16, 1958 "Microbial Persistence and Latency"
Walsh McDermott, M.D.
Cornell University Medical College

December 1, 1959 "Immunofluorescence"
Albert H. Coons, M.D.
Department of Bacteriology and Immunology
Harvard Medical School

November 15, 1960 "Epidemiologic Models in Vector-Borne Disease Studies"
George Macdonald, C.M.G., M.D., F.R.C.P.
Professor of Tropical Hygiene, University of London, and Director, Ross Institute of Tropical Hygiene, London School of Hygiene and Tropical Medicine

January 10, 1962 "Messages in Macromolecules"
Rollin D. Hotchkiss, B.A., Ph. D.
The Rockefeller Institute of Medical Research

April 24, 1963 "How Does a Virus Work"
Salvador E. Luria, M.D.
Professor of Microbiology
Massachusetts Institute of Technology

April 29, 1964 "The Malignant Transformation of Cells by Viruses"
Harry Rubin, D.V.M.
Professor of Virology
University of California, Berkeley

April 29, 1964 "The Territory of Epidemiology"
Alexander D. Langmuir, M.D.
Chief, Epidemiology Branch
Public Health Service
Communicable Disease Center
Atlanta 22, Ga.

NIH LECTURE SERIES

The NIH Lecture Series was established to facilitate interchange of information and to give appropriate recognition for outstanding scientific accomplishment. Since January 1953, the various Institutes and the Office of the Director have sponsored lectures. The series has been planned to recur each year, with the lectures published and distributed to scientific libraries, universities, medical schools, and other appropriate depositories. Lectures are open to the scientific staff at NIH and at other medical, teaching, and research institutions in the Washington, D.C., area. The following lectures have been given:

January 21, 1953 "Tricarboxylic Acid Cycle: Enzymatic Mechanisms"
Dr. Severo Ochoa
Professor of Biochemistry
New York University School of Medicine

February 16, 1953 "Constitution and Formation of Calcified Tissues"
Dr. W. D. Armstrong
Head, Department of Physiological Chemistry
University of Minnesota Medical School

March 20, 1953 "The Philosophy of the Clinical Trial"
Dr. A. Bradford Hill
Professor of Medical Statistics
London School of Hygiene and Tropical Medicine
University of London

April 20, 1953 "Changes in the Vulnerability of Tissue—An Aspect of Man's Responses to Threats"
Dr. Harold G. Wolff
Professor of Medicine (Neurology)
Cornell University Medical College

May 25, 1953 "The Regulation of ACTH Secretion"
Dr. C. N. H. Long
Sterling Professor of Physiology
Yale University School of Medicine

September 24, 1953 "Enzymatic Analysis of the Structure of Starch and Glycogen"
Dr. Carl F. Cori
Professor of Biological Chemistry
Washington University School of Medicine

November 19, 1953 "Demyelinizing Disorders in Infancy and Childhood"
Dr. Douglas Buchanan
Professor of Neurology
University of Chicago

December 17, 1953 "The New Blood Group Antigens and Antibodies—Their Impact on Clinical Medicine"
Dr. Louis K. Diamond
Associate Professor of Pediatrics
Harvard Medical School

January 14, 1954 "Ultrafiltration and Diffusion Through Biological Membranes"
Dr. John R. Pappenheimer
Department of Physiology
Harvard Medical School

February 18, 1954 "Iron-Nutrition, Metabolism, and Clinical Significance"
Dr. Carl V. Moore
Professor of Medicine
Washington University School of Medicine

March 18, 1954 "The Endocrinology of Mammary Cancer"
Dr. Charles B. Huggins
Professor of Urology and Director of the Ben May Laboratory for Cancer Research
University of Chicago School of Medicine

April 22, 1954 "Stress, Emotion, and Mental Health"
Dr. Howard S. Liddell
Department of Psychology
Cornell University

May 27, 1954 "The Mechanism of Uranium Poisoning"
Dr. Harold C. Hodge
Professor of Pharmacology and Toxicology
University of Rochester

September 30, 1954 "The Natural History of Changing One's Job"
Dr. Alan Gregg
Vice President
Rockfeller Foundation

December 16, 1954 "Avirulent Strains of Poliomyelitis Virus—Segregation, Characterization, Role in Nature, and Potential Usefulness for Human Immunization"
Dr. Albert B. Sabin
Professor of Research Pediatrics
University of Cincinnati College of Medicine

May 31, 1955 "Some Recent Developments Concerning the Chemical Transmission of Nervous Effects'
Sir Henry Hallett Dale, O.M., G.B.E., F.R.C.P., F.R.S.
Chairman, The Welcome Trust
London, England

May 1, 1957 "The Nature of Molecular Disease"
Linus Pauling, B.S., Sc. D., Ph. D.
Gates and Crellin Laboratories of Chemistry
California Institute of Technology

January 22, 1958 "Relation of Physical Science to Life Science: Communication Theory"
W. O. Baker
Vice President in Charge of Research
Bell Telephone Laboratories, Inc.

May 14, 1958 "Bioenergetics"
Albert Szent-Gyorgyi, M.D., Ph. D.
Director of the Institute for Muscle Research
Marine Biological Laboratory

October 7, 1958 "The Energy Exchanges Involved in Muscular Contraction and Nerve Conduction"
Archibald Vivian Hill, M.A., Sc. D., F.R.S.
Professor Emeritus, Department of Physiology
University College, London, England

May 5, 1959 "The Biochemical Evolution of Vision"
George Wald, Ph. D.
Professor of Biology
Harvard University

October 13, 1959 "Biosynthesis of Deoxyribonucleic Acid (DNA)"
Arthur Kornberg, M.D.
Professor and Chairman, Department of Biochemistry
Stanford University

February 9, 1960 "Biosynthesis in Human Cell Cultures"
Harry Eagle, M.D.
Chief, Laboratory of Cell Biology
NIAID, NIH

April 26, 1960 "From Fish to Philosopher"
Homer W. Smith, Sc. D.
Professor of Physiology and
Director of Physiological Laboratories
New York University College of Medicine

May 18, 1960 "The Biologist Examines the Mind and Behavior"
Seymour S. Kety, M.D.
Chief, Laboratory of Clinical Science
NIMH, NIH

October 4, 1960 "Conscious Experience—What the Brain Records and Where"
Wilder Penfield, M.D., Sc. D.
Director, Montreal Neurological Institute

December 14, 1960 "An Enzymatic Approach to Nucleic Acid Chemistry"
Leon A. Heppel, M.D., Ph. D.
Chief, Laboratory of Biochemistry and Metabolism
NIAMD, NIH

January 25, 1961 "Inquiries Concerning the Fine Structure of Protein Molecules"
John T. Edsall, M.D.
Professor of Biological Chemistry
Harvard University.

March 15, 1961 "Viruses, Common Colds and Cancer"
Robert J. Huebner, M.D.
Chief, Laboratory of Infectious Diseases
NIAID, NIH

November 15, 1961 "Endocrine Aspects of the Cancer Problem"
Roy Hertz, M.D.
Chief, Endocrinology Branch
NCI, NIH

February 28, 1962 "Relationship Between Structure and Host Reactive Properties of Microorganisms"
Edgar Ribi, Ph. D.
Head, Biophysics Section
Rocky Mountain Laboratory
NIAID, NIH

April 25, 1962 "Photosynthesis"
Melvin Calvin, Ph. D.
Director, Department of Chemistry
Lawrence Radiation Laboratory
University of California

October 17, 1962 "Status of Transuranium Elements"
Glenn T. Seaborg, B.A., Ph. D.
Chairman, U.S. Atomic Energy Commission

December 12, 1962 "Intercellular Infection and the Carrier State"
Joseph E. Smadel, M.D.
Chief, Laboratory of Virology and Rickettsiology
DBS, NIH

February 27, 1963 "The History and Natural History of Gout"
DeWitt Stetten, Jr., M.D., Ph. D.
Dean of the Medical School
Rutgers University

September 5, 1963 "Cardiovascular Surgery—Past and Present"
Dr. Alfred Blalock
Surgeon-in-Chief
Johns Hopkins Hospital

December 4, 1963 "On the Nature of the RNA Code"
Marshall W. Nirenberg, Ph. D.
Chief, Section on Biochemical Genetics
National Heart Institute

February 5, 1964 "Studies in the Sociology of Science"
Dr. Robert E. Merton
Professor and Chairman of the Department of Sociology
Columbia University

February 19, 1964 "Controlling Elements and Regulatory Circuits in Cellular Metabolism"
Dr. Jacques Monod, Ph. D.
Chief of Service
Pasteur Institute and
Professor of Biochemistry
University of Paris

October 20, 1964 "Some Biological Implications of Protein Structure"
Dr. Christian B. Anfinsen
Chief, Laboratory of Chemical Biology
National Institute of Arthritis and Metabolic Diseases

December 15, 1964 "Research in Education"
Jerome Wiesner, Ph. D.
Dean of Science
Massachusetts Institute of Technology

January 13, 1965 "Giant Nerve Fibres"
Dr. Alan L. Hodgkin
Foulerton Research Professor of the Royal Society
Physiological Laboratory
Cambridge University

JULES FREUND LECTURE SERIES

The Jules Freund Lecture series was established in 1961 and is presented annually in honor of Dr. Jules Freund, first Chief of the Laboratory of Immunology, National Institute of Allergy and Infectious Diseases.

November 15, 1961 "Studies on Hypersensitivity to Simple Chemical Allergens"
Dr. Merrill W. Chase
Rockefeller Institute

October 17, 1962 "Chemical Constitution and Immunological Specificity of Polysaccharides"
Dr. Michael Heidelberger
Rutgers University

October 7, 1963 "Autosensitization in Animals and Man"
Dr. Ernest Witebsky
Head of the Department of Bacteriology and Immunology
Buffalo School of Medicine
State University of New York

October 7, 1964 "Pleuropneumonia-like Organisms and L-forms of Bacteria"
Dr. Louis L. Dienes
Massachusetts General Hospital, Boston

DRS ENGINEERING LECTURE SERIES

The Division of Research Services Engineering Lectures present top-level engineers and scientists who are closely associated with certain specialty aspects of biomedical research facilities. The purpose of these lectures is to stimulate thinking and generate new ideas in connection with the many components that make up the total design of such facilities.

March 17, 1964—Irving A. Mann, M.D., executive vice president of the Hotpack Corp., Philadelphia. "Bio-Medical Research and the Use of Environmental Chambers."

May 19, 1964—James R. Livingston, vice president, Smith, Hinchman & Grylls Associates. "Special Problems in the Design of Research Laboratories."

July 14, 1964—H. Richard Blackwell, Ph. D., director of the Institute for Research in Vision at Ohio State University. "New Approaches for Lighting Medical Research Facilities."

September 15, 1964—Arthur E. Wheeler, chief air conditioning engineer, Henry Adams, Inc. "The Development of Criteria for Air Handling and Distribution Systems for Medical Research Facilities."

November 24, 1964—Verity C. Smith, vice president, Barnstead Still & Sterilizer Co., Boston. "Methods of Producing and Handling High Purity Water."

January 12, 1965—Kenneth R. Goddard, mechanical engineer, Biophysics Section, PHS–CDC. "Air and Surface Sampling of the Environment."

RESEARCH EQUIPMENT EXHIBIT AND SYMPOSIUM ON RECENT DEVELOPMENTS IN RESEARCH METHODS AND INSTRUMENTATION

The Research Equipment Exhibit was established in 1951 to acquaint Washington-area scientists with the most modern research tools and to give them an opportunity to discuss equipment problems with representatives of industry. In 1954, a Symposium on Recent Developments in Research Methods and Instrumentation was added, offering a balanced presentation by specialists in many areas of biomedical research. The two annual events combine to provide a convenient setting for the exchange of information between research investigators and manufacturers of scientific equipment. Both the exhibit and the symposium are open to the scientific public.

NIH INTERNATIONAL SYMPOSIA ON BIOMEDICAL RESEARCH

The NIH International Symposium on Biochemical Research was established in 1963 to emphasize the mutuality of interest of NIH and the international scientific community, particularly with the extension of NIH domestic programs overseas. The symposia are concerned with international science activities with special emphasis on the biomedical sciences. The symposium's main address reflects each meeting's theme.

October 31, 1963 "The Role of Biochemical Research in International Development"

Walsh McDermott, M.D.
Professor and Chairman
Department of Public Health
Cornell University Medical College

March 2, 1965 "Forces Influencing Development of Biomedical Research in the U.S."
Colin MacLeod, Ph. D.
Deputy Director
U.S. Office of Science and Technology

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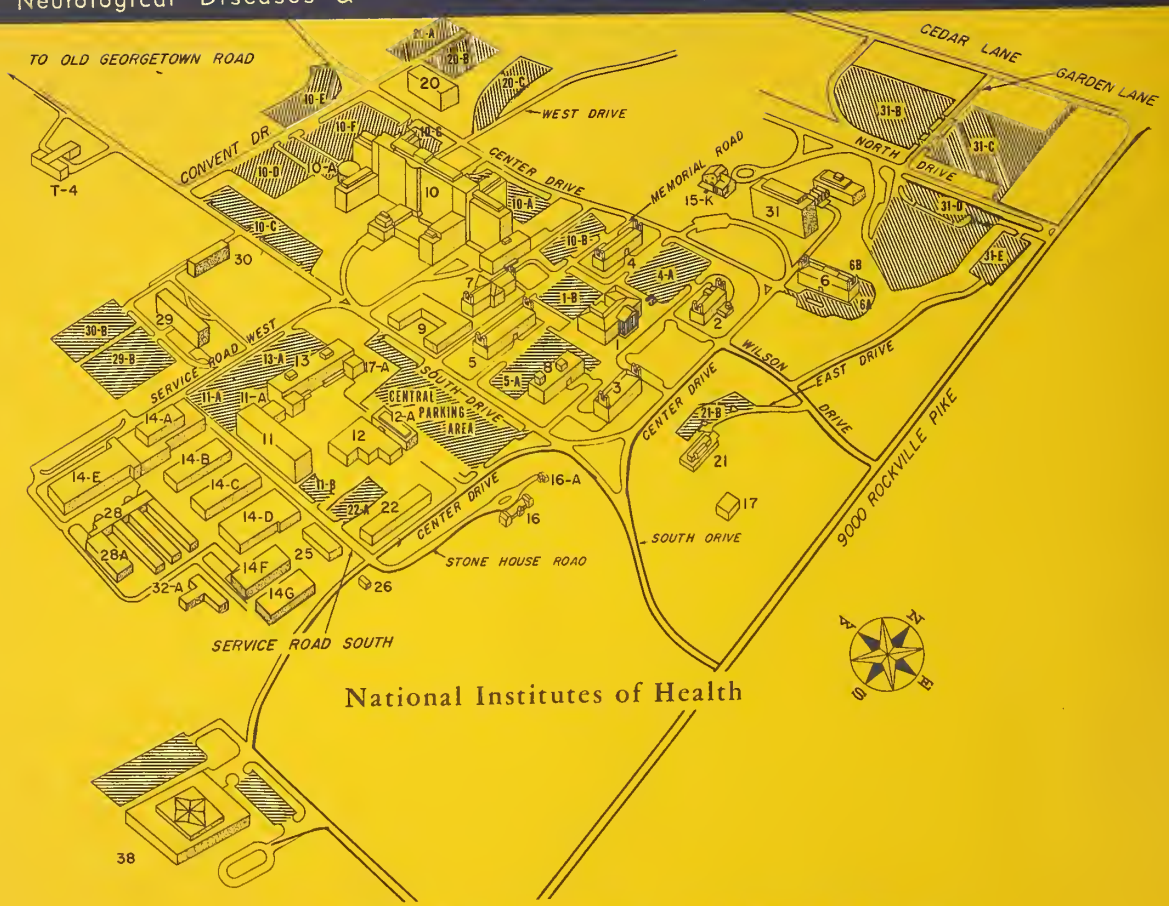
DIRECTORY OF BUILDINGS

KEY:

1 Administration
2 National Institute of Arthritis and Metabolic Diseases
3 National Heart Institute; National Institute of Arthritis and Metabolic Diseases
4 National Institute of Arthritis and Metabolic Diseases
5 National Institute of Allergy and Infectious Diseases
6 National Cancer Institute
7 National Institute of Allergy and Infectious Diseases; National Institute of Neurological Diseases & Blindness
8 National Cancer Institute; National Institute of Allergy and Infectious Diseases; National Institute of Neurological Diseases & Blindness
9 National Institute of Mental Health; National Institute of Neurological Diseases & Blindness
10 Clinical Center
10A Surgical Wing
11 Boiler Plant
11A Incinerator Building
12 Computation and Data Processing Branch; Fire House; Garage
12A Future
13 Supply Management Branch; Plant Engineering Branch; Research Facilities Planning Branch; Laundry
14A, B, C, D, E, F, G Animal and Animal Feed Buildings, Laboratory Aids Branch
15K Wilson House, Child Research Branch, NIMH
16 Stone House, Computation and Data Processing Branch; Environmental Services Branch; Conference Rooms; Management Policy Branch
16A GSA, Public Buildings Service
17 Electrical Power Vault
17A Electrical Power Plant
20 Apartment Building
21 Isotope Laboratory
22 Grounds Maintenance Building; Transportation
25 Chemical Storage
26 Chemical Disposal
28 Dog Kennels; Animal Hospital
28A Laboratory Aids Branch; Comparative Pathology Section
29 Division of Biologics Standards
30 National Institute of Dental Research Building
31 General Office Building
32A Greenhouse; National Institute of Mental Health
38 National Library of Medicine
T-4 Vacant



PUBLIC HEALTH SERVICE PUBLICATION NO. 1331